

Exhibit 68

VITAE

William Edward Longo, Ph.D
MAS, LLC
3945 Lakefield Court
Suwanee, Georgia 30024
Work Telephone: (770) 866-3200

EDUCATION

October 1980 to December 1983	Received Doctor of Philosophy in Materials Science and Engineering, University of Florida
June 1979 to May 1982	Received Master of Science in Materials Science and Engineering, University of Florida.
September 1972 to June 1977	Received Bachelor of Science degree; Major in Microbiology, Minor in Chemistry, University of Florida.

PROFESSIONAL WORK HISTORY

September 1987 to Present	President of MAS, LLC (previously Materials Analytical Services, Inc.) Suwanee, Georgia.
August 1987 to February 1988	President and Founder of Longo Microanalytical Services, Inc., Gainesville, Florida.
October 1983 to August 1987	President and Founder of Micro Analytical Laboratories, Inc., Gainesville, Florida.
March 1985 to December 1987	Visiting Assistant Professor; University of Florida, Department of Materials Science and Engineering.
August 1983 to March 1985	Post Doctoral Associate; University of Florida, Department of Materials Science and Engineering.

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PATENTS

U. S. Patent Serial No. 4671954 June 9, 1987. Goldberg, E.P., Iwata, H., and Longo, W.E., "Microspheres for Incorporation of Therapeutic Substances and Methods of Preparation Thereof."

U. S. Patent Serial No. 4871716, October 3, 1989. Goldberg, E.P., Longo, W.E., and McCluskey, R.A., "Magnetically Responsive, Hydrophilic Microspheres for Incorporation of Therapeutic Substances and Methods of Preparation Thereof."

PUBLICATIONS AND PRESENTATIONS

Egilman, D., Longo, W.E., "Egilman's Assessment Regarding Exposures of Auto Mechanics to "Amphiboles is Correct"" *Inhalation Toxicology*, 2012: 24(9); 614-618.

Rigler, M.W., Longo, W.E. & Sauerhoff, M.W.: "Exposure to Fluoropolymers and VOCs during Spray Sealant Product Use" *Inhalation Toxicology*, 23 (11): 641-657, 2011.

Ewing, W.M., Hays, S.M., Hatfield, R., Longo, W.E. & Millette, J.R. "Zonolite Attic Insulation Exposure Studies" *Int. J. Occup. Environ. Health*, Vol. 16(3), Jul/Sep, 2010.

Rigler, M.W., Longo, W.E. Emission of Diacetyl (2,3 Butanedione) from Natural Butter, Microwave Popcorn Butter Flavor Powder, Paste, and Liquid Products", *Int. J. Occup. Environ. Health*, 16:291-302, 2010.

Rigler, M.W., Longo, W.E., "Qualitative Sulfur Gas Emission as a Specific Marker for Problematic Reactive Drywall, Proceedings of the Technical Symposium on Imported Corrosive Drywall, November 5-6, 2009, the University of Florida, Gainesville, FL.

Longo, W.E., Rigler, M.W., Russell, P.E., Vitarelli, J.P., Hoffman, E.M. & Johnson, H.M. Health Effects of Welding, "The Characterization of Welding Fume Particulates and Mn Bioavailability Studies for SMAW and FCAW Consumables" NIOSH, West Virginia, July 2005.

Harris M.D., Ewing, W.M., Longo, W.E., DePasquale, C., Mount, M.D., Hatfield, R.L. & Stapleton, R. "Manganese Exposure During Shielded Metal Arc Welding (SMAW) in an Enclosed Space" *J. Occup. & Environ. Hyg.* 2(8) 375-382, 2005.

Longo, W.E., Egeland, W.B., Hatfield, R.L., Stapleton, R., and Hubbard J., "Tremolite Analysis of Chrysotile Containing Friction and Gasket / Packing Products", ASTM Johnson Conference, Johnson Vermont, July, 2002.

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Longo, W.E., Egeland, W.B., Hatfield, R.L., and Newton, L.R., "Fiber Release During the Removal of Asbestos-Containing Gaskets: A Work Practice Simulation" *Appl. Occup. Environ. Hyg.* 17(1) 55-62, 2002.

Hatfield, R.L., Krewer, J.A., and Longo, W.E., "A Study of the Reproducibility of the Micro-Vac Technique as a Tool for the Assessment of Surface Contamination in Buildings with Asbestos Containing Materials" (M.E. Beard and H.L. Rook) in *Advances in Environmental Measurement Methods for Asbestos*, ASTM #STP 1342,301, January, 2000.

Rigler, M.W., Freeman, G.B., Longo, W.E., Kyono, M. and Cai, M. "A New Rapid Method for Analyzing Single Particles", Proceedings of the Engineering Solutions to Indoor Air Quality Symposium for the United States Environmental Protection Agency (USEPA), July 21-26, 1997, Research Triangle Park, NC.

Longo, W.E., and Rigler, M.W., "Rapid Identification of Inorganic and Organic Particulate for Routine IAQ Assessment" Indoor Environment Meeting, April, 1996.

Longo, W.E., "Malignant Mesothelioma in Kent Cigarettes Smokers: Analysis of Asbestos Content in Filters, Cigarette Smoke and Lung Tissue" Society for Ultrastructural Pathology, March, 1996.

Longo, W.E., "The Identification of Asbestos Containing Surface Treatment Products using Standard Analytical Techniques" Florida Environmental and Asbestos Council Meeting, January, 1996.

Longo, W.E., Rigler, M.W. and Slade, J., "Crocidolite Asbestos Fibers in Smoke from Original Kent Cigarettes" *Cancer Research* 55 11, 2232, 1995.

Longo, W.E., "Occupational Exposure From In-Place Asbestos Containing Fireproofing" Environmental Information Association, April, 1995.

Keyes, D. L., Ewing, W. M., Hays, S. M., Longo, W. E. and Millette, J.R., "Baseline Studies of Asbestos Exposure During Operations and Maintenance Activities" *Appl. Occup. Environ. Hyg.* 9(11) Nov, 1994.

Goldberg, E.P., Quigg, J., Sitren, H., Hoffmann, E., Jayakrishnan, A., Longo, W. and Cantrell, J., "Microsphere Drug Carriers for Targeted Chemo Immunotherapy and for Intracellular Infections" 20th Annual Meeting of the Society for Biomaterials, 1994.

Millette, J.R., Longo, W.E. and Hubbard, J.L., "Demonstration of the Capability of Asbestos Analysis by Transmission Electron Microscopy in the 1960's" *Microscope*, 41 15, 1993.

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Ewing, W. M., Chesson, J., Dawson, T. A., Ewing, E. M., Hatfield, R. L., Hays, S. M., Keyes, D. L., Longo, W. E., Millette, J. R., and Spain, W. H. "Asbestos Exposure During and Following Cable Installation in the Vicinity of Fireproofing" Environmental Choices Technical Supplement, Volume I, (2), 1993.

Longo, W. E., "Sampling and Analysis of Asbestos in Dust: An Update" Environmental Information Association, April, 1993. Nashville, Tennessee.

Keyes, D. L., Chessan, J., Hayes, S. M., Hatfield, R. L., Ewing, W. M., Longo, W. E. and Millette, J. R. "Re-Entrainment of Asbestos from Dust in a Building with Acoustical Plaster" Environmental Choice, Technical Support, Volume I, (6), 1992.

Longo, W. E. "A Standard Method for the Analysis of Asbestos in Settled Dust by TEM" Asbestos Measurement Risk Assessment and Laboratory Accreditation, ASTM Conference, July 1992. Johnson, Vermont.

Longo, W. E. and Roggli, V. L., "Mineral Fiber Content of Lung Tissue in Patients with Environmental Exposures: Household Contacts vs. Building Occupants" (B. Boland and J. Cullian EDS) in The Third Wave of Asbestos Exposure to Asbestos in Place. *Annals of The New York Academy of Sciences*, Volume 63, 1991.

Keyes, D. L., Chessan, J., Ewing, W. M., Faas, J. C., Hatfield, R. L., Hayes, S. M., Longo, W. E. and Millette, J. R. "Exposure to Airborne Asbestos Associated with Simulated Cable Installation Above and Suspended Ceiling" *Am. Ind. Hyg. Assoc. J.* (52) Nov. 1991

Longo, W. E. "Sampling and Analysis of Asbestos in Settled Dust" EPA/A&WMA Symposium on "Measurement of Toxic and Related Air Pollutants", May 1991. Durham, North Carolina.

Longo, W. E. "Asbestos Wipe Sampling" Industrial Hygiene Association, October, 1990. West Palm Beach, Florida.

Longo, W. E. "Standard Test Method for Asbestos Concentrations in Dust Samples" American Society of Testing Materials Subcommittee D22.05.07, manuscript in progress.

Goldberg, E. P., Yalon, M., and Longo, W. E. "Low Voltage SEM for Unique Surface Analysis of Prosthetic Devices" Materials Research Society Symposium Proceedings 110, *Biomedical Materials and Devices*, 1989.

Longo, W. E. "Field Emission Scanning Electron Microscopy: An Alternative Technique for the Analysis of Asbestos Air Filter Samples" National Asbestos Council, September 1988. Boston, Massachusetts.

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Page 5

Goldberg, E. P., Yalon, M., and Longo, W. E. "Low Voltage Scanning Electron Microscopy for Improved Surface Characterization of Ocular Implants and Other Prosthetic Devices" American Chemical Society Symposium, September 1988. Los Angeles, California.

Longo, W. E. "Rinse Technique for Recovery of Air Samples for TEM Analysis" Asbestos Measurement Research and Laboratory Accreditation, ASTM Conference, July 1988. Johnson, Vermont.

Longo, W. E. "The Presence of Inorganic Fibers in Commercial Brands of Cigarettes" American Industrial Hygiene Conference, May 1988. San Francisco, California.

Longo, W. E. "Analysis of Asbestos by Transmission Electron Microscopy" Alabama Electron Microscopy Society 7th Annual Meeting, March 1988. Birmingham, Alabama.

Longo, W. E. "Asbestos Fiber Loss from Air Sampling Cassettes: A Study by Transmission Electron Microscopy" EPA/APCA Symposium on Measurement of Toxic and Related Air Pollutants, May 1987. Research Triangle Park, North Carolina.

Longo, W. E. "Asbestos Air Sample Analysis by Transmission Electron Microscopy" American Industrial Hygiene Conference Professional Development Course, May 1987. Montreal, Canada.

Longo, W. E., Jenkins, E. J., Greene, R., and Baxter, D. "Water Refiltration: An Alternative Sample Preparation Method for the Analysis of Airborne Asbestos by TEM" National Asbestos Council, January, 1987, Chicago, Illinois.

Longo, W. E., and Goldberg, E. P. in "Drug and Enzyme Targeting" (K. Widder and R. Green Eds) Methods of Enzymology, 112, 18, 1985.

Goldberg, E. P., Iwata, H., and Longo, W. E. "Hydrophilic Albumin and Dextran Ion-Exchange Microspheres for Localized Chemotherapy" (S. Davis, L. Illium, J. McVie, and E. Tomlinson Eds) in Microspheres and Drug Therapy. Pharmaceutical Immunological and Medical Aspects, 10, 309, 1984.

Hoffmann, E. M., Longo, W. E., and Goldberg, E. P. "Macrophage Uptake of Albumin Microsphere Drug Carriers" Proceedings of the 11th International Symposium on Controlled Release of Bioactive Materials, 11, 27, 1984.

Longo, W.E., "Albumin Microspheres for the Controlled Release of Therapeutic Agents" Doctor of Philosophy Dissertation, University of Florida, 1983.

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Longo, W. E., and Goldberg, E. P. "Novel Albumin-Polypeptide-Drug Microspheres: Synthesis and Ion Exchange Drug Release Properties" Proceedings of the 10th International Symposium on Controlled Release of Bioactive Materials, 10, 245, 1983.

Longo, W. E., Iwata, H., Lindheimer, T., and Goldberg, E. P. "Preparation and Drug Release Properties of Albumin-Polyglutamic Acid-Adriamycin Microspheres" American Chemical Society, 24, 56, 1983.

Longo, W. E., Iwata, H., Lindheimer, T., and Goldberg, E. P. "Preparation of Hydrophilic Albumin Microspheres Using Polymeric Dispersing Agents" *J. Pharm. Sci.*, 71, 1323, 1982.

Goldberg, E. P., Iwata, H., Terry, R. W., Longo, W. E., Levy, M., and Cantrell, J. L. in "Affinity Chromatography and Related Techniques" (Visser, Visser and Nivard Eds), Elsevier, Amsterdam, 375, 1982.

Longo, W. E., Iwata, H., and Goldberg, E. P. "Hydrophilic Albumin-Polyglutamic Acid-Adriamycin Microspheres for Localized Chemotherapy" 8th Annual Meeting of the Society of Biomaterials, 10, 60, 1982.

ACTIVITIES AND ORGANIZATIONS

- * Member of Environmental Protection Agency Workshop on Sampling and Analysis of Asbestos in Settled Dusts, July 1989.
- * Member of Environmental Protection Agency Peer Review Group for the Asbestos Engineering Program, 1987 to present.
- * Vice-Chairman of the National Asbestos Council Analytical Subcommittee on Transmission Electron Microscopy 1987-1988.
- * Chairman of National Asbestos Council Analytical Subcommittee on Transmission Electron Microscopy 1988-1989.
- * Member of ASTM D-22-05 Subcommittee for Indoor Air Pollution.

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LECTURES AND COURSES INSTRUCTED

Longo, W.E. "Electron Microscopy for Industrial Hygiene Applications" American Industrial Hygiene Conference Professional Development Course, Atlanta GA, May 2004.

Longo, W. E. "Settled Dust: Asbestos and Other Particulates" Georgia Institute of Technology Seminar, August 1991.

Longo, W. E. "The Role of the Laboratory Manager, Quality Assurance Officer and the Analyst for NIST Accreditation" Georgia Institute of Technology, Transmission Electron Microscopy Asbestos Accreditation Seminar, August 1989.

Longo, W. E. 24th Annual Meeting of the Microbeam Analysis Society, "Asbestos Analysis Session" Ashville, North Carolina, July 1989 (Session Co-Chairman).

Longo, W. E. "Fundamentals of Asbestos Analysis by TEM" Institute in Materials Science State University of New York. New Paltz, New York, October 1988 (Course Director).

Longo, W. E. "TEM Imaging/Photography" Georgia Institute of Technology, Transmission Electron Microscopy Asbestos Analysis Course, June 1988.

Longo, W. E. "Laboratory Preparation of Polycarbonate Filters for TEM Analysis" Georgia Institute of Technology, Advanced Transmission Electron Microscopy Asbestos Analysis Course, February 1988.

Longo, W. E. "Transmission Electron Microscopy Laboratory Set-Up" Georgia Institute of Technology, Advanced Transmission Electron Microscopy Asbestos Analysis Course, February 1988.

Longo, W. E. "Laboratory Analysis of Asbestos" Hall-Kimbrell Seminar in Asbestos Abatement in the State of Florida, January 1988.

Longo, W. E. "Air Sample Preparation and Analysis by TEM" Georgia Institute of Technology, Clearance Testing for Asbestos: AHERA Regulations, October 1987.

Longo, W. E. "Asbestos Air Sample Analysis by Transmission Electron Microscopy" American Industrial Hygiene Conference Professional Development Course, Montreal, Canada, May 1987.

Longo, W.E. "Asbestos Air Sample Analysis by Transmission Electron Microscopy" American Industrial Hygiene Conference Professional Development Course, Dallas, TX May 1986.

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PROFESSIONAL MEMBERSHIPS

American Industrial Hygiene Association	1985 to Present
American Society for the Testing of Materials	1987 to Present
American Society of Materials	1994 to Present
National Asbestos Council	1984 to 1993
Environmental Information Association	1993 to Present
Materials Research Society	1988 to Present
Electron Microscopy Society Association	1988 to Present
Microbeam Analysis Society	1988 to Present
New York Academy of Science	1985 to 1987 1989 to 1994
Air Pollution Control Association	1985 to 1987
National Institute of Building Sciences	1991 to Present
The Society for Ultrastructural Pathology	1996 to Present
American Society of Heating, Refrigerating and Air-Conditioning Engineers	1996 to Present
The American College of Forensic Examiners – Fellow of Forensic Engineering Technology (IN. 17825)	1999 to Present
American Conference of Governmental Industrial Hygienist (ACGIH) Associate Member	2006 to Present

Updated: 11/22/17

Exhibit 69

VITAE

Mark W. Rigler, Ph.D.
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Education

1985	Received Doctor of Philosophy in Microbiology, University of Georgia.
1977	Received Bachelor of Science Degree; Major in Biology, Villanova University, Villanova, PA.

Professional Work History

2017 to present	Chief Science Officer, Senior Consulting Scientist, and Technical and Quality Director for Microbiologicals, MAS, LLC, Suwanee, GA
2013 to 2017	Laboratory Manager, Senior Consulting Scientist, Technical and Quality Director for Microbiologicals, MAS, LLC, Suwanee, GA
2006 to 2013	Senior Consulting Scientist, Technical and Quality Director for Microbiologicals, MAS, LLC, Suwanee, GA
2004 to 2006	Senior Consulting Scientist, Technical and Quality Director for Microbiologicals, Materials Analytical Services, Inc., Suwanee, GA
2002 to 2004	Vice President, Materials and IH Group Director, Materials Analytical Services, Inc, Suwanee, GA
1996 to 2002	Vice President and Materials Group Director, Materials Analytical Services, Inc, Suwanee, GA
1993 to 1995	Vice President and Director of Biological Services, Materials Analytical Services, Inc, Norcross, GA
1990 to 1993	Branch Manager and Director of Biological Services, Materials Analytical Services, Inc., Norcross, GA
1989 to 1990	Director of Biological Services, Materials Analytical Services, Inc., Norcross, GA
1987 to 1989	Senior Applications Specialist, RMC, Inc. Tucson, AZ
1986	Director, SCRS Analyticals, Monroe, GA. Instructor, Biology Department, Emory University, Atlanta, GA
1985 to 1986	Postdoctoral Research Associate, Department of Microbiology, University of Georgia, Athens, GA
1978 to 1985	Research Technician, The University of Georgia Department of Microbiology, Department of Agronomy, Department of Science Education

Publications

Rigler, M.W., Longo, W.E and Sauerhoff, M.W., (2011) Exposure to fluoropolymers and VOCs during spray sealant product use. Inhalation Toxicology; 23 (11); 641-657

Rigler, M.W., Longo, W.E., (2010) Emission of Diacetyl (2,3 butanedione) from Natural Butter, Microwave Popcorn Butter Flavor Powder, Paste, and Liquid Products. International Journal of Occupational and Environmental Health; 16:291-302

Rigler, M.W., Longo, W.E., (2009) Quantitative Sulfur Gas Emission As A Specific Marker For Problematic Reactive Drywall, Proceedings of The Technical Symposium on Imported Corrosive Drywall, November 5-6, 2009, The University of Florida, Gainesville, FL.

Rigler, M.W., Freeman, G.B. Longo, W.E., Kyono, M. and Cai, M (1997). A New Rapid Method for Analyzing Single Particles. Proceedings of The Engineering Solutions to Indoor Air Quality Symposium July 21-26, 1997 for the United States Environmental Protection Agency (USEPA), Research Triangle Park, NC.

Longo, W.E., Rigler, M.W. and Slade, J.M. (1995) Crocidolite asbestos fibers in smoke from original Kent Cigarettes. Journal of the American Medical Association. 55:11, 2232-2235.

Rigler, M.W., G.C. Gerriera, and J.S. Patton. (1985) Intramembranous particles are clustered on microvillus membrane vesicles. Biochimica et Biophysica Acta. 816:131-141.

Honkanen, R.E., M.W. Rigler, and J.S. Patton. (1985) Dietary fat assimilation and bile salt absorption in the killifish intestine. American Journal of Physiology. 249 (Gastrointestinal and Liver Physiology 12) G399-416.

Harvey, H. Rodger, M.W. Rigler, J.S. Patton. (1985). The use of the Iatroscan TH-10 analyzer to quantify total lipids in a variety of samples types and lipid classes in human gallbladder bile. Lipids 20:542-545.

Rigler, M.W., R. Honkanen, and J.S. Patton. (1985). The ultrastructure of lipolytic products produced by pancreatic lipase in vitro and in vivo in the presence of bile salts. A freeze fracture study. Journal of Lipid Research 27.

Rigler, M.W. and J.S. Patton. (1984). A simple inexpensive cryogenic storage device for microscopy specimens. Journal of Microscopy. 134 (3)335-336.

Laher, J.M., M.W. Rigler, R.D. Vetter, J.A. Barrowman, and J.S. Patton. (1984). Relative bioavailability and lymphatic transport of benzo (a) pyrene when administered in different amounts of dietary fats. Journal of Lipid Research. 25 (12) 1337-1342.

Rigler, M.W., R.L. Leffert and J.S. Patton. (1983). Rapid quantification on Chromarods of cholesterol, total bile salts and phospholipids from the same microliter sample of human gallbladder bile. Journal of Chromatography. 277:321-327.

Rigler, M.W., and J.S. Patton. (1983). The production of liquid crystalline product phases by pancreatic lipase in the absence of bile salts. A freeze fracture study. Biochimica et Biophysica Acta. 751:444-454.

Rigler, M.W., I.L. Roth, D. Kritchevsky and J.S. Patton. (1983). The freeze fracture ultrastructure of peanut oil and other natural and synthetic triacylglycerol droplets. Journal of the American Oil Chemists Society 60 (7):1291-1298.

Patton, J.S., J.F. Battey, M.W. Rigler, J.W. Porter, C.C. Black, and J.E. Burris. (1983). A comparison of the metabolism of bicarbonate 14C and acetate 1-14C and the variability of species lipid composition in coral reefs. Marine Biology. 75:121-130.

Brown, H.R., J.H. Bouton, L. Rigsby, and M.W. Rigler. (1983). Photosynthesis of grass species differing in carbon dioxide fixation pathways. VIII. Ultrastructural characteristics of Panicum species in the Laxa group. Plant Physiology. 71:425-431.

Patton, J.S., M.W. Rigler, T.H. Liao, H.H. Hamosh, and M. Hamosh. (1982). Hydrolysis of triacylglycerol emulsions by lingual lipase. Biochimica et Biophysica Acta. 712:400-407.

Rigler, M.W. (1981). Freeze fracture morphology of some synthetic and naturally occurring triacylglycerols. Proceedings of the Electron Microscopy Society of America. 39th Annual Meeting, Atlanta, GA August 10-14, G.W. Bailey (ed.), Claitors Publishing Co., Baton Rouge, pp. 562-563.

Patton, J.S., M.W. Rigler, P.D. Phoem, and D.L. Fiest. (1981). Ixtoc 1 oil spill: flaking of surface mousse in the Gulf of Mexico. Nature 290:235-238.

Rigler, M.W., Taylor, J.V., Girardot, J.M., Girardot, M.N. A FESEM study of bioprosthetic heart valves after an anticalcification treatment. Annual meeting of the Southeastern Electron Microscopy Society, Athens, Georgia May 6-9, (1992).

Rigler, M.W., Visualization, in vitro and in vivo, of the products of intestinal fat digestion by freeze fracture. Annual Meeting of the American Gastroenterology Associate, New Orleans, LA, May 20-23, (1984).

Presentations

Confirming Problematic Domestic and Chinese Drywall (CDW). Session: Assessment and Control of Chinese Drywall Emissions. Presented at the American Industrial Hygiene Association's Round Table, May 24, 2010, Denver, Colorado.

Solving an Indoor Odor and Mold Problem for an Outdoor Furniture Store. At the invitation of the Georgia Chapter Roof Consultants Institute, Atlanta, GA, December 10, 2004

Identifying and Quantifying Particulates in Human Lung By Electron Microscopy. Electron Microscopy for Industrial Hygiene Applications. Presented at the American Industrial Hygiene Association's Professional Development Course, May 8, 2004, Atlanta, Georgia.

Mold Investigations, A perspective of the investigator. At the invitation of the Georgia Local Section of the American Industrial Hygiene Association, Atlanta, GA, October 3, 2003

Environmental Audits. Southeastern Regional Conference on Mold, Lead, Healthy Homes and Children's Environmental Health, Atlanta, GA, November 6-8, 2002

Mold and Fungi in Buildings. Assessing Mold and Mildew Damage. At the invitation of MACTEC Companies, Atlanta, GA, September 19, 2002

Rigler, M.W., Liquid crystalline product phases; the hydrolysis of triolein by pancreatic lipase in the absence of bile, a freeze fracture study. Annual Meeting of the Southeastern Electron Microscopy Society, Charleston, SC, May 19-21, (1982).

Current Fixation Technologies for Ultrastructural Studies. During the Current Trends in Immunomicroscopy Workshop at the invitation of George Washington School of Medicine by Fred Lightfoot, Department of Anatomy, Washington, D.C. May 28, 1992.

Ultra-fast Freezing Techniques. An overview of freezing at the June 1990 invitation of George Washington School of Medicine by Fred Lightfoot, Department of Anatomy, Washington, DC July 1987 - 1991.

Ultra-rapid Freezing Methods and Cryoultramicrotomy, Southeastern Electron Microscopists Society, Athens, GA 1988.

Freeze Fracture Cytochemistry. At the invitation of George Washington School of Medicine by Fred Lightfoot, Department of Anatomy, Washington, DC. July 1988.

Ultra-rapid Freezing Methods and Cryoultramicrotomy, Florida Society for Electron Microscopy, Tampa, FL. 1987.

An Ultrastructural View of Fat Digestion. Philadelphia Children's Hospital at the request of Yi Fu Shiau, M.D. and Peter Malet, M.D. of the Gastroenterology Section, Philadelphia V.A. Medical Center, Philadelphia, Pennsylvania on November 13, 1985.

Gastrointestinal Fat Digestion. Department of Foods and Nutrition by invitation of Roy J. Martin, Ph.D., University of Georgia, Athens, Georgia on November 4, 1985.

Freeze Fracture. Techniques and Applications. In conjunction with Ivan I. Roth, Ph.D. of the University of Georgia at the invitation of Charles D. Humphrey, Ph.D., Hepatitis Branch, Centers for Disease Control, Atlanta, Georgia on October 21, 1985.

Rigler, M.W., Freeze fracture morphology of some synthetics and naturally occurring triacylglycerols. 39th Annual Meeting of the Electron Microscopy Society of America, Atlanta, GA, August 10-14, (1981).

Rigler, M.W., Freeze etch morphology of some natural and synthetic triglyceride droplets. XVth Annual Regional Lipid Conference, Cashiers, NC, October 22-24, (1980).

Expert Panel Invitations

Invitation by Louisiana Senators A.G. Crowe District 1 and Julie Quinn, District 6 to be on an expert panel regarding Chinese Drywall, Property and Health Effects, St. Tammany Parish Council, Mandeville, LA, September 19, 2009.

Invitation by Louisiana Senators A.G. Crowe District 1 and Julie Quinn, District 6 to be on an expert panel regarding Chinese Drywall, Property and Health Effects, St. Bernard Parish Council, Chalmette, LA, October 14, 2009.

Invitation by Louisiana Senators A.G. Crowe District 1 and Julie Quinn, District 6 to be on an expert panel regarding Chinese Drywall, Property and Health Effects, Slidell, LA, October 21, 2009.

Licenses

Clinical Laboratory Director - Special - State of Georgia 1999 - 2000.

Memberships

American Chemical Society (ACS)
American Industrial Hygiene Association (AIHA)
Indoor Air Quality Association (IAQA)
Southeastern Electron Microscopy Society (SEMS)
American Association for the Advancement of Science (AAAS)
American Society for Microbiology (ASM)
Microscopy Society of America (MSA)
Society of Automotive Engineers SAE)
American Society for Testing and Materials (ASTM)
American College of Occupational and Environmental Medicine (ACOEM)
American Conference of Government Industrial Hygienists (ACGIH)

Reviewer

2006 IICRC S520 Standard and Reference Guide for Professional Mold Remediation

Certificates, Continuing Education, and Training

2016	Fortieth International Good Manufacturing Practices Conference, The University of Georgia, March 10, 2016 Introduction to Pharmaceutical CGMP Quality Systems, Center for Professional Advancement, June 3, 2016
2006	Certified Mold Inspector #CMI-06-2124 Certified Mold Remediation Contractor CMRC #06-2103
2003	Indoor air quality: Fungal spore Identification, December 2003, The McCrone Research Institute, Chicago. IL.
2002	Mold Assessment and Remediation in Buildings, Training Certificate #1297, The Environmental Institute, Atlanta, GA
1997	Potential FMEA for Manufacturing & Assembly Process (Process FMEA) Course Certificate, The Society of Automotive Engineers Professional Development Program, February 27, 1997.
1995	A Comprehensive Review of Indoor Air Quality, Air Quality Sciences, Inc., Atlanta, GA.
1992	Trace Elemental and Surface Analysis, Charles Evans & Associates, Research Triangle Park, Raleigh, NC.

Awards

1981	Presidential Scholarship Award - Electron Microscopy Society of America
1982	Ruska Award - Southeastern Electron Microscopy Society
1984	Student Research Prize, Runner up - American Gastroenterology Association
1985	Sigma XI Ph.D. Research Dissertation Award - University of Georgia Chapter

Consultant

1986	Genentech, Inc., Pharmacology Department, South San Francisco, CA.
1986	Georgia State University, Genetics Department, Atlanta, GA

Editor

1988	Electron Microscopy Hints and Tips. Alabama Electron Microscopy Society.
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Exhibit 70

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

IN RE: JOHNSON & JOHNSON
TALCUM POWDER PRODUCTS
MARKETING SALES
PRACTICES, AND PRODUCTS
LIABILITY LITIGATION } MDL NO.16-2738 (FLW) (LHG)

VIDEO-RECORDED DEPOSITION OF
WILLIAM E. LONGO, PH.D.

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APPEARANCES OF COUNSEL (continued)

On behalf of the Defendant,
Johnson & Johnson and Johnson & Johnson Consumer
Inc.:

ALEX V. CHACHKES, Esq.
NINA TROVATO, Esq.
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On behalf of the Defendant,
Imerys Talc America, Inc.:

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APPEARANCES OF COUNSEL

On behalf of the Plaintiffs:

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10:24:58 **1** turns out that it is material that if we had
 10:25:00 **2** gotten earlier we would have asked about today,
 10:25:03 **3** we are going to recall the witness.
 10:25:06 **4** MS. O'DELL: Well, we would object to any
 10:25:08 **5** motion to hold the deposition open. The
 10:25:10 **6** requests that were made for data that was
 10:25:13 **7** supplied on Saturday and earlier in the week
 10:25:17 **8** were late requests, actually only received five
 10:25:22 **9** or I think it was seven days beforehand, they
 10:25:23 **10** were timely produced, and you've had sufficient
 10:25:26 **11** time to review them.
 10:25:27 **12** The supplement that you're referring to
 10:25:28 **13** that was produced on Sunday corrected a couple
 10:25:32 **14** of typographical errors and clarified the
 10:25:37 **15** identification of a sample, none of which is
 10:25:40 **16** sufficient to hold the deposition open, so we
 10:25:42 **17** are going to oppose any such motion. Today's
 10:25:46 **18** your opportunity to depose Dr. Longo on these
 10:25:48 **19** samples.
 10:25:49 **20** MR. CHACHKES: Obviously, we disagree, and
 10:25:51 **21** we thought that material should have been
 10:25:53 **22** produced and we should not have to fight for it,
 10:25:56 **23** but it's a fight for another day.
 10:25:58 **24** So we've premarked some exhibits, some
 10:26:00 **25** things I'm sure we will be coming back to later.
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10
 10:26:02 **1** What I want to do is maybe just go through those
 10:26:04 **2** quickly so they are on the record.
3 (Defendants' Exhibit 1 was marked for
4 identification.)
 10:26:08 **5** Q. (By Mr. Chachkes) Dr. Longo, you can
 10:26:08 **6** confirm what's been marked as Exhibit 1 is your CV;
7 is that correct?
 10:26:15 **8** A. Yes, sir.
 10:26:15 **9** Q. And are there any updates to this since we
 10:26:17 **10** received it?
 10:26:18 **11** A. No, sir.
12 (Defendants' Exhibits 2 and 3 were marked
 10:26:18 **13** for identification.)
 10:26:18 **14** Q. (By Mr. Chachkes) Okay. What's been
 10:26:20 **15** marked as Exhibit 2 is your January 16 expert report
 10:26:30 **16** extracted --
 10:26:33 **17** MS. O'DELL: November 14.
 10:26:33 **18** Q. (By Mr. Chachkes) I'm sorry. What has
 10:26:34 **19** been marked as Exhibit 2 is your November 14 expert
 10:26:36 **20** report in this matter minus the backup data.
 10:26:39 **21** Can you confirm that?
 10:26:40 **22** A. This is actually the January 15.
 10:26:43 **23** Q. So --
 10:26:46 **24** A. November 14 is Exhibit 3.
 10:26:48 **25** Q. All right. Let's do that again.

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10:26:49 **1** So Exhibit 2 is your January 16 expert
 10:26:54 **2** report in this matter minus the backup data that was
 10:26:57 **3** attached to it when it was produced; is that correct?
 10:27:00 **4** A. Yes, sir.
 10:27:00 **5** Q. Okay. And then Exhibit 3 is your
 10:27:06 **6** November 14 report in this matter which was, I
 10:27:09 **7** assume, superseded by Exhibit 2; correct?
 10:27:12 **8** A. Correct.
9 (Defendants' Exhibits 4, 5, and 6 were
 10:27:13 **10** marked for identification.)
 10:27:13 **11** Q. (By Mr. Chachkes) Okay. What's been
 10:27:15 **12** marked as Exhibits 4, 5 and 6, can you confirm that
 10:27:19 **13** these are ISO 22262-1, -2, and -3?
 10:27:29 **14** A. Yes, sir.
 10:27:30 **15** Q. So 1 will be 4, 2 will be 5, and 3 will be
 10:27:37 **16** 6.
17 (Defendants' Exhibit 7 was marked for
18 identification.)
 10:27:43 **19** Q. (By Mr. Chachkes) And then what's been
 10:27:45 **20** marked as Exhibit 7 is your second supplemental
 10:27:52 **21** report minus the backup data that was attached to it
 10:27:56 **22** dated February 1, 2019; is that correct?
 10:28:00 **23** A. Yes, sir.
 10:28:00 **24** Q. And it's my understanding that this report
 10:28:05 **25** supersedes what's been marked as Exhibit 2; is that
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12
 10:28:12 **1** correct? So it supersedes the January report?
 10:28:15 **2** A. Yes, sir.
 10:28:17 **3** Q. And my understanding is that the only
 10:28:19 **4** difference between Exhibit 7 and Exhibit 2 is
 10:28:21 **5** Exhibit 7 corrects some typos?
 10:28:25 **6** MS. O'DELL: Object to the form.
 10:28:29 **7** THE WITNESS: The second supplement
 10:28:30 **8** report, essentially it was to clarification on
 10:28:35 **9** the Lee Poye J&J STS samples, 31F and 31G, and
 10:28:43 **10** it is J&J sample -- hold on, I want to get the
 10:28:53 **11** right numbers. Throws me off on two-sided. 77.
 10:29:28 **12** Q. (By Mr. Chachkes) That's okay. You've
 10:29:30 **13** given me the 31F and 31G. So am I correct in my
 10:29:34 **14** understanding that Exhibit 7 does more than correct
 10:29:38 **15** typos?
 10:29:39 **16** A. Yes. Exhibit 7 does not have any new
 10:29:45 **17** analytical data. The two samples that Lee Poye
 10:29:48 **18** had -- and I will just give the numbers -- the 31F
 10:29:52 **19** and the 31G I misunderstood. I thought that was
 10:29:54 **20** actually two samples from the same container.
 10:29:57 **21** It's actually one sample from two
 10:30:00 **22** different containers. The STS in it looks like a
 10:30:03 **23** gift wrapped for the spice and the regular. So
 10:30:08 **24** that's actually two containers for each sample. So
 10:30:11 **25** the number of containers was increased.

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10:30:13 **1** But the analytical data had been already
10:30:16 **2** produced. Nothing changed in the analytical data.
10:30:19 **3** And then we had some typos that we endeavored to
10:30:24 **4** correct.
10:30:24 **5** **Q.** Okay. And those are typos you found or
10:30:26 **6** that counsel found?
10:30:29 **7** **MR. CIRSCH:** Object to form.
10:30:31 **8** **THE WITNESS:** Well, one of them counsel
10:30:33 **9** found, and that was the counsel for Johnson &
10:30:35 **10** Johnson, at my previous deposition on MDL.
10:30:37 **11** There were some positive samples on a chart that
10:30:40 **12** were negative in the overall data, so I decided
10:30:43 **13** to go through and make sure everything was
10:30:45 **14** correct again.
10:30:47 **15** **Q.** (By Mr. Chachkes) What about the other
10:30:48 **16** typos, you found those or counsel?
10:30:52 **17** **MR. CIRSCH:** To the extent -- I would not
10:30:53 **18** have you reveal, Dr. Longo, anything that's work
10:30:56 **19** product is protected under Rule 26. But if you
10:30:58 **20** can answer aside from that, please do.
10:31:01 **21** **THE WITNESS:** No, counsel did not
10:31:02 **22** participate in helping to find typos.
10:31:04 **23** **Q.** (By Mr. Chachkes) Okay. So you found
10:31:05 **24** them personally?
10:31:06 **25** **A.** Personally and Dr. Rigler.
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1 (Defendants' Exhibits 8, 9, 10, and 11
10:31:08 **2** were marked for identification.)
10:31:08 **3** **Q.** (By Mr. Chachkes) Okay. And now
10:31:09 **4** Exhibit 8, if you would look at that, if you could
10:31:12 **5** confirm, is the January 31 quality control -- quality
10:31:19 **6** assurance report that you created in this case?
10:31:22 **7** **A.** Yes, sir.
10:31:22 **8** **Q.** Okay. And then Exhibit 9, which is more
10:31:28 **9** for the record than you because you can't confirm it,
10:31:30 **10** it is a USB with the three reports in this case, the
10:31:36 **11** November 1, the January 1, and the recent -- sorry.
10:31:42 **12** Okay. So it is November, January, and the March 2018
10:31:46 **13** report are all in full on Number 9. It's just too
10:31:50 **14** much paper so we put it on the USB.
10:31:52 **15** Can you confirm that Exhibit Number 10 is
10:31:59 **16** a letter to you from J3 dated December 12, 2018,
10:32:04 **17** about the MAS split of 21 historic talc samples by
10:32:13 **18** XRD?
10:32:14 **19** **MR. CIRSCH:** It's actually December 20.
20 **MR. CHACHKES:** What did I say?
10:32:20 **21** **MR. CIRSCH:** December 12.
10:32:20 **22** **Q.** (By Mr. Chachkes) I'm sorry. So it's
23 December --
24 **MS. TROVATO:** No, you're right. You're
25 right.
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10:32:20 **1** **MR. CHACHKES:** So which ones, then?
2 **MS TROVATO:** December 12 is 10.
10:32:22 **3** **Q.** (By Mr. Chachkes) Okay. So December 12
10:32:23 **4** is Exhibit 10; is that correct?
10:32:26 **5** **A.** Yes.
10:32:28 **6** **Q.** Okay. You should probably look at your
10:32:30 **7** own copies, not mine.
10:32:31 **8** **A.** Did I get a copy?
10:32:33 **9** **Q.** Yes, you did.
10:32:34 **10** **A.** Okay. Sorry.
10:32:35 **11** Yes, that's correct.
10:32:36 **12** **Q.** Okay. And Exhibit Number 11, we
10:32:40 **13** premarked, is another letter from J3 dated
10:32:44 **14** December 20 to you; correct?
10:32:46 **15** **A.** Correct.
10:32:46 **16** **Q.** All right.
10:32:52 **17** **MR. CIRSCH:** I'm sorry again, but
10:32:55 **18** Exhibit 10 I have says December 20 as well, so
10:32:57 **19** maybe that's -- okay. I just got two of them.
10:33:00 **20** Never mind.
10:33:04 **21** **Q.** (By Mr. Chachkes) You received your
10:33:06 **22** doctor's in philosophy in materials science and
10:33:08 **23** engineering; correct?
10:33:10 **24** **A.** Yes.
10:33:10 **25** **Q.** You're not a geologist?
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10:33:12 **1** **A.** I am not a geologist.
10:33:13 **2** **Q.** You're not a mineralogist?
10:33:15 **3** **A.** I did not take any courses in mineralogy.
10:33:17 **4** **Q.** Do you consider yourself an expert in
10:33:19 **5** mineralogy?
10:33:20 **6** **A.** Usually that's up to the courts.
10:33:22 **7** Certainly I believe I have more knowledge than the
10:33:25 **8** average layperson, but I do not hold myself out with
10:33:28 **9** any degrees in mineralogy.
10:33:29 **10** **Q.** Okay. You're not a certified industrial
10:33:31 **11** hygienist?
10:33:31 **12** **A.** No, I'm not.
10:33:33 **13** **Q.** You've done exposure assessments, though;
14 correct?
10:33:37 **15** **A.** Yes.
10:33:37 **16** **Q.** All right. You're an expert in exposure
10:33:41 **17** assessments?
10:33:42 **18** **A.** Again, I'm not sure what that means. I
10:33:45 **19** certainly have done a number of studies in which we
10:33:48 **20** have determined typical exposures from both
10:33:52 **21** asbestos-added construction industrial products as
10:33:56 **22** well as what I call hygiene exposure studies
10:33:59 **23** involving Johnson & Johnson cosmetic talc samples.
10:34:04 **24** Published on our exposure assessments in
10:34:06 **25** the past. We use all standard protocols that are
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10:34:13 **1** accepted by the community of scientists who do this
 10:34:17 **2** type of work. Been qualified many times in court as
 10:34:20 **3** an industrial hygienist specifically to asbestos.
 10:34:23 **4** So again, I have probably more knowledge
 10:34:26 **5** than the average layperson on doing exposure
 10:34:29 **6** assessment type studies involving asbestos.
 10:34:32 **7** **Q.** When a plaintiff has been exposed to
 10:34:34 **8** multiple different talc-based products, each of which
 10:34:37 **9** could possibly contain asbestos, is it best to
 10:34:40 **10** analyze the asbestos content of each product?
 10:34:43 **11** **MR. CIRSCH:** Object to form.
 10:34:46 **12** **THE WITNESS:** I'm not sure it's required
 10:34:48 **13** to analyze each product. You will have to
 10:34:51 **14** clarify. Do you mean each different
 10:34:53 **15** manufacturer or from different talc sources,
 10:34:57 **16** such as the Italian or the Vermont or Montana?
 10:35:02 **17** **Q.** (By Mr. Chachkes) Let's say different
 10:35:03 **18** manufacturers. Let's say a plaintiff has been
 10:35:06 **19** exposed to talc-based products from three
 10:35:08 **20** manufacturers. Is it best to analyze the asbestos
 10:35:10 **21** content from each of the three manufacturers?
 10:35:13 **22** **MR. CIRSCH:** Object to form.
 10:35:15 **23** **THE WITNESS:** Certainly we try to do that;
 10:35:16 **24** but if three manufacturers all have to use the
 10:35:22 **25** talcum powder source is Italy, Italian, I think
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18
 10:35:26 **1** you can imply that if one manufacturer's Italian
 10:35:30 **2** talc has measurable levels or detectable levels
 10:35:35 **3** of amphibole asbestos, then the other
 10:35:40 **4** manufacturer more likely than not would have
 10:35:41 **5** similar types of concentrations, depending on
 10:35:44 **6** their processing flotation, et cetera.
 10:35:46 **7** If you have different manufacturers from
 10:35:49 **8** completely different mines and you haven't
 10:35:51 **9** analyzed anything from the particular talc mine,
 10:35:54 **10** which has happened to me in the past, I
 10:35:56 **11** typically say I don't have any opinions.
 10:35:58 **12** **Q.** (By Mr. Chachkes) Okay. If you're trying
 10:36:01 **13** to determine which manufacturer's talc contributed
 10:36:04 **14** what level of exposure to asbestos, do you need to
 10:36:09 **15** analyze all the different manufacturers' products?
 10:36:13 **16** **MR. CIRSCH:** Object to form.
 10:36:15 **17** **THE WITNESS:** Again, it depends on who the
 10:36:16 **18** manufacturer is. It's sort of an incomplete
 10:36:19 **19** hypothetical.
 10:36:19 **20** **Q.** (By Mr. Chachkes) Okay. Let me complete
 10:36:20 **21** it, then.
 10:36:22 **22** So hypothetically, if there's three
 10:36:23 **23** manufacturers each from a different geological
 10:36:26 **24** location, if you're trying to determine the exposure
 10:36:29 **25** of a plaintiff, do you need to -- and what percentage
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10:36:34 **1** of the asbestos exposure came from which talc, would
 10:36:37 **2** you need to analyze all three?
 10:36:39 **3** **MR. CIRSCH:** Object to form.
 10:36:40 **4** **THE WITNESS:** Again, that's an incomplete
 10:36:41 **5** hypothetical. If we had never analyzed any
 10:36:44 **6** manufacturer's source of talc from any
 10:36:47 **7** particular location, then as I stated earlier, I
 10:36:51 **8** would not have an opinion about that particular
 10:36:53 **9** manufacturer.
 10:36:54 **10** If they come from things like, again,
 10:36:57 **11** Vermont, Italy, say the Korean mines, then we
 10:37:03 **12** have a pretty good understanding of the levels
 10:37:05 **13** of amphibole asbestos that are typically found
 10:37:09 **14** in the products from those mines.
 10:37:11 **15** **Q.** (By Mr. Chachkes) Okay. So you feel
 10:37:12 **16** confident that you can testify to the amount of
 10:37:16 **17** amphiboles you expect in a bottle based solely on the
 10:37:19 **18** geography from which the bottle comes?
 10:37:23 **19** **MR. CIRSCH:** Object to form.
 10:37:24 **20** **THE WITNESS:** I didn't say that.
 10:37:25 **21** **Q.** (By Mr. Chachkes) Okay.
 10:37:25 **22** **A.** What I would say is we have analyzed a
 10:37:27 **23** number of samples from other manufacturers, two
 10:37:32 **24** different manufacturers, three different
 10:37:33 **25** manufacturers, where, say, the source is Italy, so I
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20
 10:37:36 **1** know that there will be significant concentrations in
 10:37:39 **2** some percentage of the samples.
 10:37:40 **3** **Q.** Okay. So let's say you have three bottles
 10:37:43 **4** from three geographical locations that you haven't
 10:37:46 **5** analyzed in the past. Do you need to analyze each
 10:37:48 **6** bottle to determine the percentage of asbestos
 10:37:51 **7** exposure per manufacturer?
 10:37:55 **8** **MR. CIRSCH:** Object to form.
 10:37:56 **9** **THE WITNESS:** When you say each bottle, I
 10:37:58 **10** have five from each or two from each or ten from
 10:38:01 **11** each?
 10:38:01 **12** **Q.** (By Mr. Chachkes) So does it matter?
 10:38:04 **13** **A.** I don't know. I mean, it's a
 10:38:07 **14** hypothetical. If we had not tested any samples from
 10:38:10 **15** any particular geological location, I would not
 10:38:15 **16** provide opinions on any -- the potential for
 10:38:18 **17** amphibole asbestos, regulated amphibole asbestos to
 10:38:21 **18** be in those containers.
 10:38:22 **19** **Q.** Would you agree it's important to at least
 10:38:28 **20** determine a plaintiff's exposure to asbestos on a
 10:38:31 **21** comparative basis if there were multiple sources of
 10:38:36 **22** exposure?
 10:38:38 **23** **MR. CHACHKES:** Object to form.
 10:38:41 **24** **THE WITNESS:** Depends on the information.
 10:38:43 **25** If the particular plaintiff says I use
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10:38:47 **1** manufacturer X, manufacturer Y, manufacturer Z,
 10:38:52 **2** and I used them all 33.33 percent each and they
 10:38:57 **3** all come from the same geological formation of
 10:39:01 **4** where cosmetic talc is being used in those
 10:39:04 **5** containers, then my opinion would be if it is a
 10:39:08 **6** geological location that we have tested in the
 10:39:11 **7** past, that they would all have similar -- that
 10:39:15 **8** the manufacturers would have similar exposures.
 10:39:17 **9** If one of the manufacturers was, well,
 10:39:20 **10** I've got a gift -- for example, if I got a gift
 10:39:22 **11** bag once a year and I would use it and that's
 10:39:26 **12** all, then I would say that the primary exposure
 10:39:28 **13** is from the other manufacturers.
 10:39:29 **14** So it just depends on the circumstances.
 10:39:31 **15** Q. (By Mr. Chachkes) Okay. You're not a
 10:39:33 **16** pathologist?
 10:39:34 **17** A. No, sir, I'm not.
 10:39:35 **18** Q. You have no medical training?
 10:39:37 **19** A. No, sir, I don't have any medical
 10:39:39 **20** training.
 10:39:39 **21** Q. Are you a statistician?
 10:39:41 **22** A. I'm not a statistician.
 10:39:42 **23** Q. Are you a geostatistician?
 10:39:45 **24** A. I'm not that kind of statistician either.
 10:39:48 **25** Q. Okay. So in light of the reports that we

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10:40:55 **1** MR. CIRSCH: Object to form.
 10:40:56 **2** THE WITNESS: I don't recall the exact
 10:40:57 **3** words, no.
 10:40:57 **4** Q. (By Mr. Chachkes) Okay. Do you agree
 10:40:58 **5** that if you want to know whether there's asbestos in
 10:41:00 **6** talc, you would go to either your lab or Lee Poye's
 10:41:03 **7** lab and that's it?
 10:41:04 **8** MR. CIRSCH: Object to form.
 10:41:05 **9** THE WITNESS: It depends on the
 10:41:06 **10** circumstances. If you're going to understand
 10:41:09 **11** what's your best opportunity to see and get the
 10:41:12 **12** appropriate detection limits, I'm only aware of
 10:41:16 **13** Lee Poye and our lab that use routinely the
 10:41:21 **14** heavy liquid density separation method.
 10:41:22 **15** There may be other labs out there doing
 10:41:24 **16** it, but that's the only two I know at the
 10:41:26 **17** moment.
 10:41:26 **18** Q. (By Mr. Chachkes) Okay. So you know of
 10:41:27 **19** no other labs besides yours and Lee Poye that can
 10:41:32 **20** accurately determine whether there's asbestos in
 10:41:35 **21** talc, at least using the concentration method?
 10:41:38 **22** MR. CIRSCH: Object to form.
 10:41:39 **23** THE WITNESS: Accurately determine? It's
 10:41:41 **24** all about getting the best analytical
 10:41:44 **25** sensitivity. So analytical sensitivities and

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10:39:50 **1** have in this case, are you here to testify in your
 10:39:53 **2** capacity as a microscopist; is that accurate?
 10:39:57 **3** MR. CIRSCH: Object to form.
 10:39:58 **4** THE WITNESS: I'm here to testify on the
 10:40:01 **5** qualifications I have and have been accepted in
 10:40:03 **6** the past. I'm a material scientist; I'm an
 10:40:07 **7** industrial hygienist; I have many expertise in
 10:40:10 **8** the analysis of asbestos.
 10:40:13 **9** My testimony in the past has been that any
 10:40:17 **10** particular types of manufacturers where we have
 10:40:21 **11** analyzed the talc and we have analyzed the
 10:40:24 **12** source -- know the source, that more likely than
 10:40:28 **13** not there would have been a significant exposure
 10:40:32 **14** based on the percentages of the samples that are
 10:40:34 **15** positive. That's as far as I go.
 10:40:36 **16** Q. (By Mr. Chachkes) You've testified in the
 10:40:38 **17** past the following: In my opinion, if you want to
 10:40:41 **18** know if there's asbestos in talc, you would go to
 10:40:44 **19** either our lab or Lee Poye's lab and that's it.
 10:40:47 **20** Do you recall that testimony?
 10:40:49 **21** MR. CIRSCH: Object to form. Do you have
 10:40:51 **22** a copy of the testimony you can show the
 10:40:53 **23** witness?
 10:40:53 **24** Q. (By Mr. Chachkes) Do you recall that
 10:40:53 **25** testimony?

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10:41:48 **1** using the non-heavy liquid density separation
 10:41:50 **2** method for TEM is usually in the low to 10 to 12
 10:41:59 **3** million fibers per gram.
 10:42:01 **4** The heavy liquid density separation can
 10:42:04 **5** reduce that; at least in our lab we have gotten
 10:42:06 **6** as low as 3,000 fibers/bundles per gram. I know
 10:42:11 **7** the R.J. Lee Group used the Blount heavy density
 10:42:16 **8** liquid separation method once for TEM. There is
 10:42:19 **9** an ISO protocol for it, so there may be other
 10:42:21 **10** labs that I'm not aware of.
 10:42:23 **11** Q. (By Mr. Chachkes) So are you the only
 10:42:24 **12** lab -- you and Lee Poye -- who can detect 3,000
 10:42:29 **13** structures per gram?
 10:42:32 **14** MR. CIRSCH: Object to form.
 10:42:34 **15** THE WITNESS: I don't know. Anybody
 10:42:35 **16** following the heavy liquid density measurement
 10:42:37 **17** technique should be able to achieve detection
 10:42:39 **18** limits --
 10:42:39 **19** Q. (By Mr. Chachkes) Okay.
 10:42:39 **20** A. -- as such.
 10:42:40 **21** Q. So your opinion about the high
 10:42:43 **22** qualifications of your lab and Lee Poye's lab, it's
 10:42:45 **23** not based on different methodologies; it's just based
 10:42:48 **24** on your opinion that you do it better?
 10:42:50 **25** MR. CIRSCH: Object to form.

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10:42:51 **1** THE WITNESS: Well, it's not really doing
10:42:52 **2** it better; it's just following the appropriate
10:42:54 **3** protocol for the analytical sensitivities.
10:42:57 **4** There may be other labs out there. John
10:43:00 **5** Fitzgerald's lab may be doing it now. I don't
10:43:01 **6** know.
10:43:03 **7** **Q.** (By Mr. Chachkes) Okay.
10:43:04 **8** **A.** That's the only two I'm aware of that are
10:43:06 **9** routinely doing it now.
10:43:07 **10** **Q.** MAS has been testing talc for asbestos by
10:43:11 **11** TEM since 2017; is that correct?
10:43:14 **12** **MR. CIRSCH:** Object to form.
10:43:16 **13** **THE WITNESS:** We have been testing
10:43:17 **14** cosmetic talc since early 2017. We have tested
10:43:21 **15** industrial talc all the way back to the 1990s,
10:43:27 **16** early 2000s.
10:43:28 **17** **Q.** (By Mr. Chachkes) MAS has been testing
10:43:32 **18** talc for asbestos by PLM since about October of 2018;
10:43:36 **19** is that correct?
10:43:36 **20** **MR. CIRSCH:** Object to form.
10:43:41 **21** **THE WITNESS:** I don't know when we got
10:43:43 **22** started testing industrial talc for PLM.
10:43:46 **23** Probably way back in the 1990s, early 2000s.
10:43:51 **24** We've recently started analyzing cosmetic
10:43:56 **25** talc using the ISO 22262-1 and the Blount PLM
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10:44:05 **1** method enhanced, not your typical analysis. I
10:44:11 **2** don't know when we got started last year.
10:44:13 **3** **Q.** (By Mr. Chachkes) Okay. Is it possible
10:44:16 **4** you didn't start looking at cosmetic talc by PLM
10:44:19 **5** until October of 2018?
10:44:21 **6** **MR. CIRSCH:** Object to form.
10:44:23 **7** **THE WITNESS:** Well, unless I can go and
10:44:24 **8** look and verify, all I can say is I don't recall
10:44:26 **9** when we started analyzing cosmetic talc by PLM.
10:44:31 **10** **Q.** (By Mr. Chachkes) Have any academic
10:44:33 **11** institutions endorsed MAS as one of the best labs in
10:44:37 **12** the world to test talc?
10:44:39 **13** **A.** If they have, they haven't let me know.
10:44:41 **14** **Q.** Has MAS received any accolades from any
10:44:44 **15** academic institutions for its talc testing?
10:44:47 **16** **A.** Not that I'm aware of.
10:44:49 **17** **Q.** Have any nationally or internationally
10:44:51 **18** renowned TEM scientists identified MAS as one of the
10:44:55 **19** best labs in the world for testing talc?
10:44:58 **20** **MR. CIRSCH:** Object to form.
10:45:01 **21** **THE WITNESS:** I don't know who these
10:45:03 **22** internationally recognized experts are. We're
10:45:06 **23** just following a standard protocol to analyze
10:45:09 **24** talc using the most appropriate sensitivities
10:45:14 **25** for analytical sensitivities.
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10:45:16 **1** **Q.** (By Mr. Chachkes) So you're not aware of
10:45:17 **2** any TEM scientists who's not taking plaintiff
10:45:23 **3** lawyers' money who has recognized MAS as one of the
10:45:26 **4** best labs in the world for testing talc?
10:45:29 **5** **MR. CIRSCH:** Object to form.
10:45:31 **6** **THE WITNESS:** I don't recall any TEM
10:45:33 **7** analyst being paid by plaintiffs' attorneys or
10:45:37 **8** any TEM analyst paid by defense attorneys that
10:45:38 **9** are calling me and saying good job, Bill.
10:45:41 **10** **Q.** (By Mr. Chachkes) Have any nationally or
10:45:45 **11** internationally renowned PLM scientists identified
10:45:47 **12** MAS as one of the best labs in the world for testing
13 talc?
10:45:48 **14** **MR. CIRSCH:** Object to form.
10:45:50 **15** **THE WITNESS:** I don't know who these
10:45:52 **16** internationally renowned PLM labs are. I do
10:45:55 **17** believe we're -- because of how we've enhanced
10:45:59 **18** the PLM method that we are one of the better
10:46:04 **19** labs because of the time and effort we put into
10:46:06 **20** the analysis. Sort of along the lines of the
10:46:10 **21** proposed PLM method by the FDA in 1973, I think
10:46:14 **22** they said it was laborious.
10:46:16 **23** **Q.** (By Mr. Chachkes) All right. So this is
10:46:17 **24** not a question about what you believe or what people
10:46:19 **25** at MAS believe but a question about what third
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10:46:22 **1** parties believe.
10:46:23 **2** Are there any nationally or
10:46:25 **3** internationally renowned PLM scientists or any
10:46:27 **4** scientists, for that matter, who have identified MAS
10:46:30 **5** as one of the best labs in the world for testing talc
10:46:33 **6** under PLM?
10:46:34 **7** **MR. CIRSCH:** Object to form.
10:46:35 **8** **THE WITNESS:** I don't know.
10:46:35 **9** **Q.** (By Mr. Chachkes) Have you ever presented
10:46:37 **10** at any conferences about testing talc by TEM?
10:46:40 **11** **A.** Maybe. Not cosmetic talcs, no.
10:46:48 **12** **Q.** Okay. When you say maybe, nothing comes
10:46:51 **13** to mind?
10:46:51 **14** **A.** Well, we have been analyzing industrial
10:46:54 **15** talcs for some time. We have given talks at Johnson
10:47:00 **16** Conferences in the past; Mr. Hatfield has. Any of
10:47:01 **17** that data that may have happened, I just don't know.
10:47:05 **18** **Q.** Okay. But for conferences that relate to
10:47:08 **19** testing talc with TEM, sitting here today, you can't
10:47:11 **20** recall presenting at any such conference?
10:47:15 **21** **MR. CIRSCH:** Object to form.
10:47:17 **22** **THE WITNESS:** I don't recall.
10:47:17 **23** **Q.** (By Mr. Chachkes) Have you ever presented
10:47:18 **24** at any conference -- sorry, strike that.
10:47:20 **25** Have you ever been invited to present at
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10:47:23 **1** any conferences about testing talc with TEM or PLM?
 10:47:26 **2** **A.** Yes, I was.
 10:47:27 **3** **Q.** Okay. What was that?
 10:47:28 **4** **A.** Bruce Bishop invited me to come debate
 10:47:34 **5** Dr. Sanchez at a DRI conference last year.
 10:47:37 **6** **Q.** Okay. So did you actually go to that
 10:47:38 **7** conference?
 10:47:38 **8** **A.** No.
 10:47:39 **9** **Q.** And DRI conference, that's a defense bar
 10:47:42 **10** conference?
 10:47:42 **11** **A.** Yes, sir. I have participated in those
 10:47:45 **12** for a number of times and typically debating one of
 10:47:49 **13** the defense experts. And he sent an email, and I
 10:47:56 **14** couldn't arrange it in my schedule.
 10:47:57 **15** **Q.** The FDA had a conference in November '18
 10:48:01 **16** with Jeff San at the University of Maryland; are you
 10:48:03 **17** aware of that?
 10:48:04 **18** **A.** I am.
 10:48:05 **19** **Q.** Were you invited to participate?
 10:48:06 **20** **A.** No.
 10:48:06 **21** **Q.** Are you familiar with Forensic Analytical
 10:48:10 **22** Labs?
 10:48:10 **23** **A.** I am.
 10:48:11 **24** **Q.** Would you agree that they are an
 10:48:13 **25** independent laboratory?
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10:48:14 **1** MR. CIRSCH: Object to form.
 10:48:16 **2** THE WITNESS: I don't know what their
 10:48:17 **3** background is.
 10:48:19 **4** **Q.** (By Mr. Chachkes) Okay. Have you relied
 10:48:20 **5** on their testing of talc for asbestos before?
 10:48:24 **6** **A.** I don't know.
 10:48:25 **7** **Q.** Sitting here today, is there any reason
 10:48:29 **8** why you believe you shouldn't be able to rely on
 10:48:31 **9** their work?
 10:48:32 **10** MR. CIRSCH: Object to form.
 10:48:33 **11** THE WITNESS: It depends on the work. I
 10:48:35 **12** would have to review what work that
 10:48:37 **13** hypothetically you want me to rely on.
 10:48:38 **14** **Q.** (By Mr. Chachkes) Yeah. So I'm just
 10:48:40 **15** talking about the laboratory, not necessarily the
 10:48:42 **16** nature of the science, which of course you'll always
 10:48:46 **17** review; right?
 10:48:46 **18** So the nature of the laboratory -- and
 10:48:48 **19** sitting here today, is there anything about the
 10:48:50 **20** Forensic Analytical Labs laboratory that makes you
 10:48:54 **21** suspicious of their work in any way?
 10:48:56 **22** **A.** I don't have an opinion one way or the
 10:48:58 **23** other. Typically, for me to say something about any
 10:49:00 **24** particular lab, I would have to have some interaction
 10:49:04 **25** with that lab over the years.
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10:49:07 **1** **Q.** Now, you issued a supplemental report
 10:49:10 **2** January 15, 2019; correct?
 10:49:12 **3** **A.** Yes, sir.
 10:49:12 **4** **Q.** Why? What did it add to or subtract from
 10:49:17 **5** the first report?
 10:49:18 **6** **A.** There was typos in the first report.
 10:49:21 **7** Also, we talked -- added somewhere, I believe, the
 10:49:25 **8** Blount PLM that we did on the -- or talked about it
 10:49:33 **9** on the 16 containers that Lee Poye tested.
 10:49:39 **10** **Q.** And those errors that you just referred
 10:49:43 **11** to, when did you identify them? Was it after you
 10:49:44 **12** issued your January 15 report -- I'm sorry, after you
 10:49:47 **13** issued your November 14 report?
 10:49:49 **14** **A.** Yes.
 10:49:49 **15** **Q.** And how did you identify those errors?
 10:49:53 **16** **A.** Reading through it. It was very obvious
 10:49:58 **17** to me that J3 was not P3, that I had missed it in a
 10:50:03 **18** couple of places.
 10:50:04 **19** **Q.** Okay. So the errors that were identified
 10:50:05 **20** and fixed in the January 15 report, they were all
 10:50:08 **21** identified by you personally?
 10:50:09 **22** **A.** Either myself or Dr. Rigler. I can't tell
 10:50:12 **23** you which one of us fixed the most.
 10:50:15 **24** **Q.** Okay. And referring to these additional
 10:50:19 **25** data in the January 15 report, did that testing occur
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10:50:23 **1** after November 14, 2018?
 10:50:27 **2** **A.** Yes. I believe so.
 10:50:30 **3** **Q.** And then there's a second supplemental
 10:50:32 **4** report dated February 1, 2019; correct?
 10:50:35 **5** **A.** Correct.
 10:50:35 **6** **Q.** Okay. And we discussed that before,
 10:50:38 **7** didn't we?
 10:50:38 **8** **A.** Yes, sir.
 10:50:39 **9** **Q.** Do you know why it was not produced until
 10:50:47 **10** February 2?
 10:50:48 **11** MR. CIRSCH: Object to form.
 10:50:52 **12** THE WITNESS: Why it wasn't produced until
 10:50:54 **13** February 2?
 10:50:54 **14** **Q.** (By Mr. Chachkes) Yeah.
 10:50:55 **15** **A.** Because that's when I sent it.
 10:50:56 **16** **Q.** Okay. You also produced two reports from
 10:51:04 **17** Lee Poye at J3 Resources dated December 12 and
 10:51:09 **18** December 21; correct?
 10:51:10 **19** **A.** Correct.
 10:51:10 **20** **Q.** Can you describe what those reports are?
 10:51:11 **21** **A.** XRD of 17 MDL samples -- excuse me -- 19
 10:51:21 **22** MDL samples to finish off the MDL samples for XRD
 10:51:26 **23** that we were going to test. We didn't test the
 10:51:30 **24** Windsor railroad car samples for XRD.
 10:51:33 **25** **Q.** And there's some PLM work in there as
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10:51:35 **1** well?
10:51:37 **2** **A.** I don't know.
10:51:39 **3** **Q.** That's okay. We can get back to that.
10:51:40 **4** Do these samples in Lee Poye's
10:51:47 **5** supplemental reports relate to -- do they correspond
10:51:53 **6** to samples in your report?
10:51:54 **7** **A.** Yes.
10:51:54 **8** **Q.** How did they -- how can somebody correlate
10:51:58 **9** the two?
10:51:59 **10** **A.** Let me see. There should have been a --
10:52:12 **11** let me get some of this stuff out of the way.
10:52:15 **12** **Q.** Actually, you know, let's -- here. Let's
10:52:17 **13** go back to 10.
10:52:20 **14** Exhibit 10 is the December 12 letter
10:52:23 **15** from -- this is mine. You've got one in your stack.
10:52:25 **16** **A.** Oh, do I?
10:52:26 **17** **Q.** Yes.
10:52:27 **18** **A.** Okay.
10:52:32 **19** **Q.** Just the coding system, let's just take
10:52:34 **20** the first one. M69722-001, do you see on the front
10:52:40 **21** page?
10:52:40 **22** **A.** Yes.
10:52:40 **23** **Q.** Do you know what that refers to? Does
10:52:42 **24** that coding indicate something to you?
10:52:44 **25** **A.** It does. I didn't -- we don't have the
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10:52:48 **1** key.
10:52:48 **2** What I do is I make an additional number
10:52:52 **3** so that the -- Lee Poye essentially gets blind
10:52:58 **4** samples, and there's supposed to be a key produced
10:53:00 **5** with that.
10:53:01 **6** **Q.** Okay. You have a key?
10:53:02 **7** **A.** I don't have it with me. I thought it was
10:53:04 **8** attached to the report.
10:53:05 **9** **MR. CHACHKES:** We ask the plaintiffs to
10:53:08 **10** produce that key. I don't think we got it.
10:53:11 **11** **MS. O'DELL:** Okay.
10:53:15 **12** **Q.** (By Mr. Chachkes) Okay. So have you
10:53:19 **13** produced all the J3 -- all the data J3 Resources
10:53:24 **14** generated from the work for you in this case?
10:53:27 **15** **A.** Yes.
10:53:27 **16** **Q.** And did you ask them about what kind of
10:53:31 **17** materials they generated?
10:53:33 **18** **A.** I mean, other than what they sent me, no.
10:53:38 **19** **Q.** Okay. So you didn't ask them whether
10:53:39 **20** there was additional material that they generated but
10:53:42 **21** just did not provide to you?
10:53:44 **22** **A.** No, sir. I have dealt with and had XRD
10:53:48 **23** done by them before in other reports, and this is
10:53:51 **24** what they provide.
10:53:52 **25** **Q.** Has anyone at MAS discussed the production
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10:53:56 **1** request in this case with anybody at J3 Resources?
10:53:59 **2** **A.** No.
10:53:59 **3** **Q.** What measures do you employ to ensure that
10:54:02 **4** J3 Resources provides all the data it generated in
10:54:06 **5** its work for you?
10:54:07 **6** **MR. CIRSCH:** Object to form.
10:54:08 **7** **Q.** (By Mr. Chachkes) Actually, strike that.
10:54:09 **8** I think we have already done that.
10:54:10 **9** All right. Your lab produced something
10:54:11 **10** called global particles tables for a number of
10:54:15 **11** samples. Does that ring a bell?
10:54:16 **12** **A.** Yes.
10:54:16 **13** **Q.** Okay. And what are those?
10:54:21 **14** **A.** That's the raw data for each of the
10:54:24 **15** particles that were measured and counted.
10:54:26 **16** **Q.** Okay. And so that's the data underlying
10:54:30 **17** what you report in your expert reports?
10:54:33 **18** **MR. CIRSCH:** Object to form.
10:54:34 **19** **THE WITNESS:** Not in this expert report,
10:54:35 **20** I'm not relying on it, but in past ones, yes.
10:54:37 **21** **Q.** (By Mr. Chachkes) Okay. Because those
10:54:38 **22** are non-MDL samples?
10:54:41 **23** **A.** Well, they're non-MDL samples. It's not
10:54:44 **24** so much they're non-MDL samples, but I was under the
10:54:48 **25** impression that these MDL samples weren't contested
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10:54:51 **1** for chain of custody.
10:54:52 **2** **Q.** Okay. But what I'm asking, though, is the
10:54:55 **3** global particle tables that you produced in this case
10:54:58 **4** do not correspond to MDL samples; is that correct?
10:55:03 **5** **A.** That is correct.
10:55:04 **6** **Q.** Okay. Are you able to generate a global
10:55:07 **7** particle table for the MDL samples?
10:55:10 **8** **A.** We have not analyzed any MDL samples yet
10:55:13 **9** that I'm aware of.
10:55:13 **10** **Q.** What about the samples in your reports in
10:55:16 **11** this case?
10:55:16 **12** **A.** Well, they're not particle size analysis.
10:55:20 **13** They're PLM and TEM analysis. Those are specifically
10:55:25 **14** designed for detection of amphibole asbestos, not
10:55:31 **15** particle sizing.
10:55:32 **16** **Q.** Why did you produce the global particle
10:55:34 **17** tables in this case?
10:55:35 **18** **MR. CIRSCH:** Object to form.
10:55:36 **19** **THE WITNESS:** I was asked for it, you
10:55:39 **20** know, in other cases, so I thought I would just
10:55:41 **21** produce it here, even though I'm not relying on
10:55:43 **22** it.
10:55:46 **23** **Q.** (By Mr. Chachkes) Okay. Do you do talc
10:55:52 **24** particle size analysis for the MDL?
10:55:54 **25** **A.** We did not.
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10:55:55 **1** Q. All right. But the data in the global
10:56:07 **2** particle tables relates to talc particle size?
10:56:12 **3** A. Yes, sir. All the particles for the talc
10:56:15 **4** sizes that -- in the -- I guess it was in August 4,
10:56:22 **5** 2017, or 2018 report, I can't remember.
10:56:24 **6** Q. Sitting here today, are you aware of any
10:56:27 **7** relevance that the global particle tables that you
10:56:30 **8** produced have to the reports you issued in this case,
10:56:33 **9** the MDL?
10:56:35 **10** MR. CIRSCH: Object to form.
10:56:36 **11** THE WITNESS: Again, as I'm stating, I'm
10:56:38 **12** not relying on it. We did not do any MDL
10:56:40 **13** particle sizing. May in the future, but we
10:56:44 **14** haven't done it here, and I'm not relying on the
10:56:46 **15** report that we issued --
10:56:47 **16** Q. (By Mr. Chachkes) Okay.
10:56:49 **17** A. -- in August.
10:56:50 **18** Q. Did your analyst compare any of the
10:56:52 **19** particles identified in your MDL report by PLM to
10:56:59 **20** compare them with a known asbestos reference sample?
10:57:03 **21** MR. CIRSCH: Object to form.
10:57:14 **22** THE WITNESS: I don't know. It's not
10:57:16 **23** something that we typically require analysts to
10:57:19 **24** do, especially the analyst doing this. He's
10:57:23 **25** worked for us for almost 30 years; he's a
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10:57:26 **1** professional geologist; he's probably analyzed
10:57:30 **2** tens and tens and tens of thousands of samples.
10:57:33 **3** He does compare to the appropriate
10:57:38 **4** information --
10:57:43 **5** MR. CIRSCH: Let him finish.
10:57:45 **6** Q. (By Mr. Chachkes) Yeah.
10:57:46 **7** A. So did he pull out standard anthophyllite
10:57:47 **8** tremolite? I would have to check.
10:57:48 **9** Q. So when you say compared to the
10:57:50 **10** appropriate information, you have no knowledge of
10:57:52 **11** what that appropriate information is, do you?
10:57:54 **12** A. Sure I do.
10:57:54 **13** MR. CIRSCH: Object to form.
10:57:56 **14** THE WITNESS: The refractive indices, the
10:58:01 **15** measurement of -- indices, the angle of
10:58:02 **16** extinction, either oblique or parallel, depend
10:58:05 **17** on cross polars, the dispersion staining on the
10:58:08 **18** colors using the Su charts to determine the
10:58:13 **19** refractive indices, the sign of elongation, or
10:58:13 **20** the speed.
10:58:13 **21** Q. (By Mr. Chachkes) So all these --
10:58:14 **22** A. All the standard mineralogical information
10:58:16 **23** that a well-seasoned PLM analyst would do.
10:58:20 **24** Q. So I'm not talking about the data that he
10:58:23 **25** pulls from looking at samples. I'm talking about
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10:58:26 **1** comparing to a reference sample from some source
10:58:30 **2** other than something generated by MAS, are you aware
10:58:33 **3** of any of that?
10:58:34 **4** MR. CIRSCH: Object to form.
10:58:36 **5** THE WITNESS: They have all the references
10:58:38 **6** for all the NIST standards that are routinely
10:58:41 **7** looked at when we get -- when our lab is audited
10:58:47 **8** by the NVLAP, they go around and make sure the
10:58:51 **9** analysts can identify these types of materials.
10:58:53 **10** So, yes, we have reference materials. You
10:58:56 **11** know, did they pull it out or not, as I'm
10:58:59 **12** sitting right here specifically, but they do do
10:59:01 **13** that periodically. So that's all I can tell
10:59:05 **14** you.
10:59:05 **15** Q. (By Mr. Chachkes) Okay. So you have NIST
10:59:07 **16** samples, but you don't know whether your PLM
10:59:09 **17** scientist actually compared the PLM work he did in
10:59:13 **18** this case to those NIST samples for this case?
10:59:18 **19** A. Specifically for these MDL samples did he
10:59:23 **20** pull out the standards or just use the standard
10:59:27 **21** crystallographic information that's specific for the
10:59:31 **22** identification of these types of amphiboles, I'd have
10:59:35 **23** to check.
10:59:36 **24** Q. Okay. So I was asking about the NIST
10:59:38 **25** standard, and you threw in something else. I just
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10:59:41 **1** want to focus on the NIST standard.
10:59:43 **2** Sitting here today you're not aware that
10:59:44 **3** your PLM scientist compared his results on the PLM
10:59:47 **4** for the samples in this case directly to the NIST
10:59:52 **5** sample -- NIST standards; correct?
10:59:55 **6** MR. CIRSCH: Object to form.
10:59:56 **7** THE WITNESS: It's not being aware or not
10:59:57 **8** aware. It's just a question that I can clear up
11:00:01 **9** and ask.
11:00:02 **10** Q. (By Mr. Chachkes) Okay. Did you ask him
11:00:05 **11** at any point?
11:00:07 **12** A. No. I typically don't ask 30-year
11:00:12 **13** seasoned analysts/geologists on any particular
11:00:15 **14** project. But now that you've asked the question,
11:00:18 **15** I'll ask.
11:00:18 **16** Q. Okay. And so you have one analyst doing
11:00:24 **17** all your PLM work for the MDL samples?
11:00:25 **18** A. Yes.
11:00:26 **19** Q. What's his name or her name?
11:00:27 **20** A. Paul Hess.
11:00:29 **21** Q. Spell the last name, please.
11:00:31 **22** A. H-e-s-s.
11:00:32 **23** Q. Your report doesn't state that there were
11:00:38 **24** asbestos reference samples used in the PLM analysis;
25 correct?
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11:00:43 **1** **A.** No, sir. It's not the type of information
11:00:45 **2** I would typically put in a report.
11:00:47 **3** **Q.** Do you know which set of NIST standards
11:00:53 **4** exist at MAS right now?
11:00:56 **5** **A.** It is the 1875, I think it is. I have to
11:01:02 **6** check the numbers on it. It's the standard NIST
11:01:05 **7** samples that all asbestos labs have or should have.
11:01:09 **8** **Q.** Do you know when you obtained them?
11:01:11 **9** **A.** Not as I sit here today.
11:01:13 **10** **Q.** Did your analyst compare any of the
11:01:15 **11** particles identified in this report by TEM with any
11:01:19 **12** known asbestos reference samples?
11:01:21 **13** **A.** Well, we have analyzed both reference
11:01:30 **14** tremolite series, anthophyllite series. We have all
11:01:33 **15** those reference standards, analytical data on the TEM
11:01:39 **16** walls. I don't think they pulled the reference and
11:01:43 **17** put them in each and every time, but they routinely
11:01:47 **18** check reference samples.
11:01:49 **19** **Q.** Okay. So when you say they check
11:01:51 **20** reference samples, are you saying you mean that they
11:01:53 **21** check to whatever's on your reference wall?
11:01:56 **22** **MR. CIRSCH:** Object to form.
11:01:57 **23** **THE WITNESS:** Well, no. The reference
11:01:58 **24** wall is from the reference samples, and we have
11:02:01 **25** analyzed reference samples in the past
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11:02:03 **1** specifically for these J&J cases. And the
11:02:08 **2** analysts are well trained.
11:02:10 **3** I don't know how often they need to pull
11:02:12 **4** out a reference sample in order to identify
11:02:14 **5** either the anthophyllite solid solution series
11:02:17 **6** or the tremolite solid solution series.
11:02:21 **7** **Q.** (By Mr. Chachkes) Let's ask two different
11:02:23 **8** lines of questions here.
11:02:24 **9** So you have internal MAS-generated
11:02:27 **10** reference samples for TEM to identify asbestos; is
11:02:30 **11** that correct?
11:02:30 **12** **A.** Yes.
11:02:31 **13** **Q.** Okay. Did you produce them?
11:02:34 **14** **MR. CIRSCH:** Object to form.
11:02:35 **15** **THE WITNESS:** I didn't think it was asked.
11:02:37 **16** **MR. CHACHKES:** Okay. I would ask the
11:02:38 **17** plaintiffs produce that, please.
11:02:40 **18** **Q.** (By Mr. Chachkes) What about reference
11:02:42 **19** samples generated by third parties, do you have
11:02:47 **20** those?
11:02:49 **21** **A.** Reference samples by third parties, you
11:02:51 **22** will have to -- NIST is a third party.
11:02:53 **23** **Q.** Okay. So anything else?
11:02:58 **24** **A.** We have accumulated reference samples now
11:03:01 **25** from anthophyllite asbestos from Windsor County, and
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11:03:09 **1** I'd have to look at them and see what the validation
11:03:13 **2** is. We have cummingtonite standards now. We have
11:03:17 **3** grunerite standards. We have -- I believe we have
11:03:21 **4** winchite and richterite standards. We have not
11:03:25 **5** analyzed them yet to the degree where we can put the
11:03:28 **6** results altogether.
11:03:28 **7** **Q.** So are these -- so I'm talking about
11:03:31 **8** reference standards that you can look at those and
11:03:35 **9** compare to what you're generating in this case. So
11:03:39 **10** you're saying that there are third-party
11:03:41 **11** anthophyllite standards that you have that were
11:03:45 **12** produced by something in Windsor County?
11:03:48 **13** **MR. CIRSCH:** Object to form.
11:03:49 **14** **THE WITNESS:** It wasn't produced by
11:03:50 **15** Windsor County. It was a mineral house that
11:03:57 **16** sells them. And I have not had an opportunity
11:04:01 **17** to -- we haven't had an opportunity to look at
11:04:03 **18** them yet.
11:04:03 **19** **Q.** (By Mr. Chachkes) That's just the
11:04:05 **20** mineral, though, right, the raw mineral?
11:04:07 **21** **MR. CIRSCH:** Object to form.
11:04:08 **22** **THE WITNESS:** Well, it's fibrous, it's raw
11:04:11 **23** mineral anthophyllite, raw mineral
11:04:15 **24** cummingtonite, raw mineral grunerite, raw
11:04:18 **25** mineral winchite-richterite.
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11:04:22 **1** **Q.** (By Mr. Chachkes) Okay. For those
11:04:22 **2** minerals that you just mentioned, did you obtain from
11:04:24 **3** a third party a TEM photo of the mineral at issue
11:04:31 **4** that you can use as a standard to compare what you
11:04:34 **5** find under your TEM?
11:04:36 **6** **MR. CIRSCH:** Object to form.
11:04:38 **7** **THE WITNESS:** No. Typically people don't
11:04:39 **8** provide that -- or NIST should have -- a TEM lab
11:04:43 **9** that's looking at standards should have the
11:04:46 **10** qualifications and training to be able to
11:04:49 **11** recognize the regulated asbestos types.
11:04:52 **12** **Q.** (By Mr. Chachkes) Okay. So, now, the
11:04:54 **13** only third-party TEM photographs that you could use
11:04:59 **14** as a standard for determining whether what you're
11:05:03 **15** looking at under your TEM is asbestos, the only one
11:05:06 **16** you've mentioned so far is NIST; correct?
11:05:09 **17** **A.** I'm sorry, I misunderstood.
11:05:10 **18** NIST does not provide you TEM pictures or
11:05:12 **19** EDS pictures or PLM pictures or any XRD pictures.
11:05:16 **20** They assume you have the training and capability of
11:05:19 **21** doing that.
11:05:19 **22** I'm not aware of any third-party group
11:05:21 **23** providing photograph standards along with the
11:05:25 **24** samples.
11:05:25 **25** **Q.** Okay. So to sum it all up, you do not
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11:05:27 **1** have any third-party TEM photos that you use as
 11:05:33 **2** standards to compare to what you're seeing under the
 11:05:35 **3** TEM?
 11:05:36 **4** MR. CIRSCH: Object to form.
 11:05:37 **5** THE WITNESS: That's correct. No third
 11:05:38 **6** party has sent us TEMs along with their
 11:05:41 **7** standards and say here's a standard with a TEM
 11:05:44 **8** photo and this is what it all looks like.
 11:05:46 **9** Q. (By Mr. Chachkes) Your report also does
 11:05:47 **10** not state that the analyst used asbestos reference
 11:05:52 **11** standards in their TEM analysis; correct?
 11:05:55 **12** A. That is correct. None of our reports do.
 11:05:57 **13** Q. How does your lab distribute samples to
 11:05:59 **14** individual analysts to test? Is it random? Is it
 11:06:02 **15** like some analysts get a certain kind of sample?
 11:06:05 **16** A. It's random.
 11:06:06 **17** Q. Is that the same for J3? Did you give
 11:06:08 **18** them random samples?
 11:06:11 **19** MR. CIRSCH: Object to form.
 11:06:13 **20** THE WITNESS: Random samples. For J3 I
 11:06:15 **21** specifically gave them the samples that we
 11:06:17 **22** wanted XRD done on them.
 11:06:18 **23** Q. (By Mr. Chachkes) Okay. But for your
 11:06:23 **24** individual analyst, nobody's getting like more
 11:06:25 **25** Vermont and someone's getting more China, that kind
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11:06:29 **1** of thing?
 11:06:29 **2** A. Not that I'm aware of.
 11:06:30 **3** Q. You didn't give any particular analyst
 11:06:32 **4** like you're getting more bottles from the '50s and
 11:06:36 **5** '60s and someone else is getting something more from
 11:06:38 **6** a later era, that's not happening?
 11:06:40 **7** A. It's fairly random. The analysts don't
 11:06:43 **8** have any knowledge of anything more than the sample
 11:06:47 **9** number. They don't know if it's China or Vermont
 11:06:51 **10** or -- we're not telling them anything other than they
 11:06:54 **11** just get a sample number.
 11:06:55 **12** Q. Who decides which analyst gets which
 11:06:58 **13** bottles?
 11:06:58 **14** A. That's a good question. I guess Victoria
 11:07:08 **15** Panariello does.
 11:07:08 **16** Q. Who is she?
 11:07:09 **17** A. She is the head person in our TEM lab.
 11:07:14 **18** Q. Head person meaning administrative?
 11:07:18 **19** Scientist?
 11:07:18 **20** A. She's a scientist.
 11:07:19 **21** Q. Does she do any analysis herself?
 11:07:21 **22** A. Occasionally.
 11:07:22 **23** Q. Under what instrument?
 11:07:23 **24** A. She's -- she can do both polarized light
 11:07:28 **25** microscopy as well as transmission electron
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11:07:30 **1** microscopy.
 11:07:30 **2** Q. Would you expect two analysts from your
 11:07:34 **3** laboratory, given splits from the same bottle, to
 11:07:38 **4** identify the same asbestos concentration?
 11:07:40 **5** A. You'll never get an exact asbestos
 11:07:50 **6** concentration depending on what level of accessory
 11:07:57 **7** amphibole asbestos is in the sample, but I would not
 11:08:00 **8** expect the exact same.
 11:08:01 **9** Q. What level of variation would you think is
 11:08:05 **10** so great that you would conclude something went
 11:08:08 **11** wrong?
 11:08:10 **12** A. Don't know. I've not seen that variation
 11:08:12 **13** yet for two different samples of the same bottle
 11:08:15 **14** that's been analyzed.
 11:08:16 **15** Q. Okay. Hypothetically, if you split a
 11:08:19 **16** bottle and one analyst found no detectable asbestos
 11:08:22 **17** and another found half a percent by concentration
 11:08:27 **18** asbestos, would you think that was within a
 11:08:30 **19** reasonable margin of error?
 11:08:33 **20** MR. CIRSCH: Object to form.
 11:08:34 **21** THE WITNESS: By TEM?
 11:08:35 **22** Q. (By Mr. Chachkes) Sure, by TEM.
 11:08:37 **23** A. At a half a percent?
 11:08:39 **24** Q. Yeah.
 11:08:39 **25** A. No, that's not acceptable.
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11:08:41 **1** Q. Okay. What about one analyst finding no
 11:08:46 **2** detectable asbestos, another finding a quarter of a
 11:08:50 **3** percent?
 11:08:50 **4** MR. CIRSCH: Object to form.
 11:08:51 **5** Q. (By Mr. Chachkes) Is that an acceptable
 11:08:52 **6** margin of error?
 11:08:53 **7** A. .25 percent by weight? A quarter percent?
 11:08:59 **8** Q. No, no. A quarter of a percent.
 11:09:02 **9** MR. CIRSCH: Object to form.
 11:09:03 **10** THE WITNESS: Isn't that .25? Isn't that
 11:09:05 **11** a quarter of a percent?
 11:09:09 **12** Q. (By Mr. Chachkes) Yeah.
 11:09:09 **13** A. Sometimes simple math gets the better of
 11:09:13 **14** me.
 11:09:14 **15** I would think that would be unacceptable;
 11:09:16 **16** something has gone wrong.
 11:09:18 **17** Q. Just to spare me from the trouble of doing
 11:09:20 **18** this all day, at what point would you say, you know,
 11:09:23 **19** that's acceptable, and maybe a little larger wouldn't
 11:09:26 **20** be acceptable?
 11:09:26 **21** MR. CIRSCH: Object to form.
 11:09:27 **22** THE WITNESS: I'd have to look at every
 11:09:29 **23** situation to see what that percentage is before
 11:09:31 **24** I could say what is acceptable and not
 11:09:34 **25** acceptable.
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11:09:35 **1** Q. (By Mr. Chachkes) Okay. You have no
11:09:39 **2** written or decided standard in your laboratory for
11:09:42 **3** what kind of error between two analysts is acceptable
11:09:45 **4** or not acceptable, do you?
11:09:47 **5** MR. CIRSCH: Object to form.
11:09:48 **6** THE WITNESS: Yeah, we do. We have
11:09:49 **7** measured where they have gone in and analyzed
11:09:52 **8** the same sample. See, when you were asking for
11:09:53 **9** what's acceptable and not acceptable, it's not
11:09:56 **10** so much on the analyst's side. It could be the
11:09:58 **11** preparation side. It could be a number of
11:10:01 **12** things.
11:10:02 **13** So we have done error rates for the
11:10:06 **14** analyst by TEM analysis where they go in and we
11:10:10 **15** know that in these many grid openings there's
11:10:12 **16** this many fibers, and then we can have them
11:10:15 **17** analyze the same grid openings.
11:10:17 **18** You're taking out the part about the
11:10:19 **19** sample preparation, the filter preparation. So
11:10:22 **20** you have to look at it individually. But for
11:10:24 **21** error rates for the analyst, we have that.
11:10:27 **22** Q. (By Mr. Chachkes) Okay. But just
11:10:29 **23** comparing -- just visually comparing a grid, a single
11:10:32 **24** grid; correct?
11:10:33 **25** MR. CIRSCH: Object to form.
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11:10:35 **1** THE WITNESS: Grid openings --
11:10:35 **2** Q. (By Mr. Chachkes) Yeah.
11:10:36 **3** A. -- where each analyst is told to count the
11:10:39 **4** same grid opening and, therefore, you can determine
11:10:43 **5** what the analyst -- what the coefficient of variation
11:10:48 **6** is.
11:10:49 **7** If you have a sample where -- you take two
11:10:52 **8** samples and one sample is -- they found one fiber in
11:10:54 **9** a hundred grid openings and another sample they found
11:10:57 **10** zero, that's within the -- that's within the margin
11:11:00 **11** of error. That's acceptable.
11:11:02 **12** If you have a sample where one analyst
11:11:04 **13** found 50 fibers and one analyst found none or one,
11:11:10 **14** then something has happened, and you have to go back
11:11:12 **15** and look and go, okay, are the grid openings you
11:11:14 **16** looked at he looked at in the first one. So there is
11:11:17 **17** a process that we have to evaluate all data where we
11:11:22 **18** have multiple samples of the same container.
11:11:24 **19** Q. Sample preparation is extremely important
11:11:27 **20** because that affects the --
21 (Cell phone rings.)
22 Q. (By Mr. Chachkes) Okay. Sample
23 preparation is extremely important because that
11:11:50 **24** affects the outcomes; correct?
11:11:53 **25** MR. CIRSCH: Object to form.
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11:11:54 **1** THE WITNESS: All sample preparation is
11:11:55 **2** important.
11:11:55 **3** Q. (By Mr. Chachkes) And do all your
11:11:56 **4** analysts use the same sample preparation methods?
11:12:01 **5** A. All the people who -- the folks who
11:12:06 **6** prepare the samples use the method that is
11:12:10 **7** appropriate for the analysis that's going to be done.
11:12:13 **8** Q. If there is -- for all the samples that
11:12:18 **9** were analyzed in your report, were they prepared --
11:12:22 **10** the sample preparation, were they all done by the
11:12:25 **11** same method?
11:12:26 **12** A. Yes.
11:12:26 **13** Q. Were they all done by the same person?
11:12:28 **14** A. I would have to look. But yes. Most
11:12:31 **15** likely these samples were all done by the same
11:12:34 **16** person.
11:12:34 **17** Q. Okay. If you took a split from a single
11:12:41 **18** bottle and you had two analysts look at it, would you
11:12:44 **19** expect them to identify the same kinds of asbestos,
11:12:47 **20** assuming there was asbestos spotted?
11:12:49 **21** MR. CIRSCH: Object to form.
11:12:52 **22** THE WITNESS: Not necessarily, no.
11:12:53 **23** Q. (By Mr. Chachkes) Okay. So one could say
11:12:54 **24** I see tremolite and another could say I see
11:12:57 **25** anthophyllite and you don't think that is -- that
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11:13:01 **1** demonstrates a problem?
11:13:03 **2** MR. CIRSCH: Object to form.
11:13:04 **3** THE WITNESS: If the chemistry is right,
11:13:08 **4** the -- and they have identified it correctly,
11:13:11 **5** no. Many of these samples have two types of
11:13:16 **6** asbestos in it.
11:13:16 **7** Q. (By Mr. Chachkes) Okay. Is there any
11:13:22 **8** situation where you think an analyst has identified
11:13:26 **9** an asbestos that you believe maybe there's an error
11:13:30 **10** there?
11:13:32 **11** MR. CIRSCH: Object to form.
11:13:33 **12** THE WITNESS: I haven't run across
11:13:34 **13** anything like that, no.
11:13:35 **14** Q. (By Mr. Chachkes) And if one -- if there
11:13:36 **15** was a split and one analyst said I found -- let's say
11:13:39 **16** there was a split three ways, and one of your
11:13:42 **17** analysts said I found anthophyllite, another analyst
11:13:45 **18** said I found tremolite, and a third analyst said I
11:13:49 **19** found nothing detectable, you would not say maybe
11:13:52 **20** there's a problem here?
11:13:53 **21** MR. CIRSCH: Object to form.
11:13:54 **22** THE WITNESS: Unless I could review the
11:13:55 **23** data and -- you know, it's an interesting
11:13:56 **24** hypothetical. I don't think we have run across
11:13:58 **25** that interesting hypothetical.
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11:13:59 **1** But I would have to review the data to see
11:14:02 **2** what they're analyzing, what the chemistry is,
11:14:05 **3** how did they identify, and how many asbestos
11:14:09 **4** fibers the two that found it versus the one that
11:14:12 **5** didn't. So it's --
11:14:14 **6** **Q.** (By Mr. Chachkes) Okay.
11:14:14 **7** **A.** -- you just can't say is this a problem,
11:14:18 **8** this -- maybe, maybe not.
11:14:20 **9** **Q.** Okay. So there is a situation you would
11:14:22 **10** say there is not a problem where three analysts
11:14:25 **11** looking at the same bottle finding -- one found
11:14:29 **12** anthophyllite, one found tremolite, one found nothing
11:14:31 **13** detectable, there is a situation where that would not
11:14:33 **14** be a problem, you can imagine that?
11:14:35 **15** **MR. CIRSCH:** Object to form.
11:14:35 **16** **THE WITNESS:** I don't know if I can
11:14:37 **17** imagine any of this happening, but it's your
11:14:40 **18** hypothetical. Unless I can look at the data and
11:14:44 **19** understand what each of the analysts were
11:14:46 **20** counting, how many structures, what is the
11:14:48 **21** chemistry, what is the diffraction patterns, is
11:14:51 **22** it the two analysts found one and one found
11:14:54 **23** zero, is this -- you know, what is the mine this
11:14:58 **24** is coming from, how does our other data look --
11:15:01 **25** there's a lot involved there than just saying
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11:15:03 **1** off the cuff, oh, that's a problem or that's not
11:15:05 **2** a problem.
11:15:06 **3** **Q.** (By Mr. Chachkes) Okay. All right. I've
11:15:08 **4** asked you whether you can imagine a situation where
11:15:11 **5** that's not a problem. You have not provided that to
11:15:13 **6** me. This is -- I'll just ask it one more time. Can
11:15:16 **7** you provide that to me? I can imagine that's not a
11:15:18 **8** problem.
11:15:18 **9** **MR. CIRSCH:** Object to form. I think he
11:15:20 **10** answered your question.
11:15:21 **11** **THE WITNESS:** I can't give you any
11:15:22 **12** additional information about that because I
11:15:25 **13** don't -- as a scientist I just don't like to
11:15:27 **14** say, well, this is -- I can imagine a problem
11:15:30 **15** here, I can't imagine it's a problem, without
11:15:32 **16** looking at any data to see how many asbestos
11:15:34 **17** fibers each of the analysts counted, is it one,
11:15:37 **18** is it ten, is it five, what's the chemistry look
11:15:40 **19** like, the EDXA, the SAED. I would have to
11:15:47 **20** review it to see if it's a problem or not.
11:15:49 **21** **Q.** (By Mr. Chachkes) Is there sufficient
11:15:50 **22** subjectivity in the system such that it could be
11:15:52 **23** correct that one analyst could find in a bottle
11:15:55 **24** tremolite and another analyst could find in the
11:15:57 **25** bottle anthophyllite?
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11:15:58 **1** **MR. CIRSCH:** Object to form.
11:16:00 **2** **THE WITNESS:** I don't think it's
11:16:01 **3** subjectivity. I just think it's wherever the
11:16:05 **4** cosmetic talc source was in any particular mine,
11:16:09 **5** what's there. We have many samples that have
11:16:12 **6** both types of asbestos in it.
11:16:14 **7** So you can't say, well, you found this and
11:16:18 **8** the other one found that, when the source, the
11:16:21 **9** accessory -- amphibole asbestos accessory
11:16:23 **10** mineral in these mines have both types.
11:16:26 **11** **Q.** (By Mr. Chachkes) If one of your
11:16:27 **12** scientists looked at a J&J bottle of talc and found a
11:16:32 **13** particular concentration of a particular kind of
11:16:36 **14** asbestos, would you -- do you believe to within a
11:16:42 **15** scientific -- a degree of scientific -- reasonable
11:16:45 **16** scientific degree of certainty that a second
11:16:50 **17** scientist following proper procedures would find the
11:16:52 **18** same?
11:16:52 **19** **MR. CIRSCH:** Object to form.
11:16:53 **20** **THE WITNESS:** I think we already talked
11:16:54 **21** about this. I would never expect a second
11:16:56 **22** scientist or a second analyst going in with a
11:16:59 **23** separate prep sample finding the exact amount.
11:17:00 **24** And again, it depends on how many is there.
11:17:03 **25** We did discuss this once. If it's one or
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11:17:05 **1** two and the second analyst found none, that's in
11:17:08 **2** the margin of error, or it's looking for the
11:17:12 **3** needle in the haystack sort of analogy.
11:17:15 **4** If one analyst found 50 and the other
11:17:18 **5** found zero, yes, that's a problem, like we
11:17:19 **6** already discussed. Again, I would have to look
11:17:21 **7** at the data to determine if it's a problem or
11:17:23 **8** not.
11:17:24 **9** **Q.** (By Mr. Chachkes) Do you believe it's
11:17:26 **10** appropriate, given this margin of error, to run
11:17:30 **11** multiple tests on a single bottle and then average
11:17:33 **12** the results to get what would be the correct answer?
11:17:37 **13** **MR. CIRSCH:** Object to form.
11:17:38 **14** **THE WITNESS:** I don't think that's
11:17:39 **15** necessary. I think the -- we can accept what
11:17:42 **16** the analysis is. It comes from a sample in a
11:17:45 **17** bottle. The more you run, you may go from
11:17:50 **18** nondetect initially to detect in the second or
11:17:54 **19** third. But I don't think that is necessary to
11:17:56 **20** do for the types of analysis we're doing.
11:17:59 **21** **Q.** (By Mr. Chachkes) For two of your
11:18:02 **22** analysts analyzing the same bottle, what degree of
11:18:06 **23** difference in the detected percentage of fibers
11:18:10 **24** versus detected percentage of bundles would you
11:18:17 **25** expect normally?
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<p>11:18:19 1 MR. CIRSCH: Object to form.</p> <p>11:18:20 2 THE WITNESS: I don't have any</p> <p>11:18:21 3 expectations. The analyst is ultimately making</p> <p>11:18:24 4 the decision if it is a single fiber or a</p> <p>11:18:28 5 bundle. Because he's looking in the microscope,</p> <p>11:18:31 6 he's the one who can -- you're looking through</p> <p>11:18:34 7 the fiber, he's the one doing the -- he can</p> <p>11:18:38 8 change the focal plane, he can change from dark</p> <p>11:18:42 9 field to bright field, so ultimately he's making</p> <p>11:18:44 10 the decision on it.</p> <p>11:18:46 11 Q. (By Mr. Chachkes) I am asking really what</p> <p>11:18:49 12 is the margin of error in detecting fiber versus</p> <p>11:18:53 13 bundle percentage, acceptable margin of error. Have</p> <p>11:18:57 14 you ever figured that out?</p> <p>11:18:58 15 A. We haven't done that; it's really not</p> <p>11:19:00 16 necessary. It's more important for coefficients of</p> <p>11:19:04 17 variation. I've reviewed all the photographs of</p> <p>11:19:07 18 fibers and bundles. I would say 95, 98 percent of</p> <p>11:19:14 19 them I agree with. There's a couple percent in there</p> <p>11:19:18 20 that you have to leave it up to the analyst to make</p> <p>11:19:21 21 that decision.</p> <p>11:19:22 22 Q. Would you expect an analyst in your lab</p> <p>11:19:25 23 and an analyst in Lee Poye's lab to get the same</p> <p>11:19:29 24 results for a particular bottle? Is it the same</p> <p>11:19:32 25 answer as I've been getting with two analysts in your Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>	<p>11:20:48 1 synonymously in your report?</p> <p>11:20:50 2 A. I think all ours say EDXA. EDS is old</p> <p>11:20:54 3 school. They're both the same technique: energy</p> <p>11:20:56 4 dispersive spectroscopy or energy dispersive x-ray</p> <p>11:21:00 5 spectroscopy.</p> <p>11:21:00 6 Q. Do you expect all the samples from a</p> <p>11:21:01 7 single mine, for example, the cosmetic talc from</p> <p>11:21:08 8 J&J's Vermont mine, to have similar SAED patterns?</p> <p>11:21:15 9 A. Depending on the orientation of the</p> <p>11:21:18 10 crystal and depending on what the material is.</p> <p>11:21:22 11 Tremolite, winchite, richterite,</p> <p>11:21:27 12 actinolite typically have similar, but the</p> <p>11:21:30 13 anthophyllite solid solution series, especially from</p> <p>11:21:34 14 Vermont where you can have no iron, iron-rich,</p> <p>11:21:38 15 cummingtonite, high-iron cummingtonite, and actually</p> <p>11:21:43 16 going to grunerite, those will have different</p> <p>11:21:46 17 reflections because you're going from orthorhombic to</p> <p>11:21:49 18 monoclinic.</p> <p>11:21:50 19 Q. So would you expect all the samples from a</p> <p>11:21:53 20 single mine to have the same concentration of</p> <p>11:21:57 21 asbestos?</p> <p>11:21:58 22 A. No.</p> <p>11:21:59 23 Q. Why not?</p> <p>11:22:00 24 A. Because you're dealing with accessory</p> <p>11:22:02 25 minerals. It just depends on where it's being dug Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>
<p>11:19:34 1 lab?</p> <p>11:19:34 2 MR. CIRSCH: Object to form.</p> <p>11:19:36 3 THE WITNESS: Yes. I would expect,</p> <p>11:19:38 4 depending on what the count is or how many</p> <p>11:19:41 5 fibers, if it's not in the margin of error, that</p> <p>11:19:44 6 we would verify that it's same bottle as</p> <p>11:19:47 7 positive. But other than that, I would have to</p> <p>11:19:51 8 see the data to see.</p> <p>11:19:52 9 Q. (By Mr. Chachkes) When you say -- when</p> <p>11:19:55 10 you say it's not within the margin of error, what's</p> <p>11:19:58 11 the quantification of that margin of error?</p> <p>11:20:00 12 A. I think our analysts have a margin of</p> <p>11:20:02 13 error on coefficient of variation somewhere in the 6</p> <p>11:20:03 14 to 7 percent range. So one lab finding one fiber or</p> <p>11:20:07 15 maybe two fibers, another lab finding zero or finding</p> <p>11:20:10 16 four, I don't have any issue with that.</p> <p>11:20:14 17 Q. Would you expect the samples, the various</p> <p>11:20:23 18 bottles from a single mine, like all the bottles from</p> <p>11:20:26 19 J&J talc from Vermont, cosmetic talc from the Vermont</p> <p>11:20:31 20 mine, to have roughly the same EDS spectra?</p> <p>11:20:36 21 MR. CIRSCH: Object to form.</p> <p>11:20:38 22 THE WITNESS: Depending on the type of</p> <p>11:20:39 23 asbestos, yes.</p> <p>11:20:39 24 Q. (By Mr. Chachkes) Okay. By the way, I've</p> <p>11:20:43 25 seen EDXA; I've seen EDS. Do you use those Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>	<p>11:22:07 1 out of the mine.</p> <p>11:22:07 2 Q. Would you expect all the samples from a</p> <p>11:22:10 3 single mine to have the same fiber versus bundle</p> <p>11:22:14 4 ratio?</p> <p>11:22:15 5 A. Not necessarily. All these materials are</p> <p>11:22:18 6 milled, and you're dealing with an asbestos type</p> <p>11:22:21 7 tremolite-anthophyllite that's brittle. So I don't</p> <p>11:22:26 8 know if I would expect to see the same bundles to</p> <p>11:22:30 9 fibers.</p> <p>11:22:30 10 And of course you're also dealing with the</p> <p>11:22:33 11 microscopist who has to make that final decision, the</p> <p>11:22:36 12 TEM microscopist, if it's a single fiber or bundle.</p> <p>11:22:40 13 What we try to make sure happens is that</p> <p>11:22:44 14 every asbestos fiber or bundle we identify meets the</p> <p>11:22:49 15 counting criteria for a regulated asbestos fiber or</p> <p>11:22:53 16 bundle as per the TEM methods, both ISO, ASTM.</p> <p>11:22:59 17 That's the most important thing.</p> <p>11:23:01 18 And then we try to also get some</p> <p>11:23:03 19 consistency on whether it's bundles or fibers. But</p> <p>11:23:08 20 that's what we strive for, is following the protocol,</p> <p>11:23:12 21 following the standard counting rules, and</p> <p>11:23:15 22 identification.</p> <p>11:23:16 23 Q. Hypothetically, if one of your researchers</p> <p>11:23:21 24 analyzed 150 different samples from a single mine and</p> <p>11:23:25 25 another researcher analyzed those same 150 samples, Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>

11:23:29 **1** would you expect the averages for both the
11:23:31 **2** researchers to be the same?
11:23:33 **3** MR. CIRSCH: Object to form.
11:23:34 **4** THE WITNESS: I don't know. I'd have
11:23:35 **5** to -- I mean, again, you have to look at the
11:23:37 **6** data and determine what that percentage is for
11:23:41 **7** those exact same samples and what they found
11:23:43 **8** versus the other.
11:23:45 **9** I wouldn't be surprised if they're in the
11:23:47 **10** range of an average or in the range of high to
11:23:49 **11** low. If it's not in that range, then I would
11:23:52 **12** have to look at it to see if it's a problem or
11:23:54 **13** not.
11:24:03 **14** Can we go off the record for a second?
11:24:07 **15** MR. CIRSCH: Sure.
11:24:11 **16** (Recess from 11:24 a.m. to 11:39 a.m.)
11:39:52 **17** **Q.** (By Mr. Chachkes) Dr. Longo, there are
11:40:50 **18** bottles of J&J talc, cosmetic talc, where you've not
11:40:56 **19** detected asbestos; correct?
11:40:58 **20** **A.** That's correct.
11:40:58 **21** **Q.** So for example, there are some bottles of
11:41:02 **22** Vermont sourced J&J talc where you've not detected
11:41:06 **23** asbestos; correct?
11:41:07 **24** **A.** That is correct. The better way to say
11:41:09 **25** that is the asbestos, if present, is below our
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11:41:12 **1** detection limit.
11:41:13 **2** **Q.** Okay. Do you have any opinion as to
11:41:21 **3** whether, if one of those bottles were retested,
11:41:23 **4** whether you would get the same result?
11:41:25 **5** MR. CIRSCH: Object to form.
11:41:27 **6** THE WITNESS: And again, this is -- the
11:41:29 **7** same result is either zero or nondetect below
11:41:33 **8** our detection limit or possibly one right at the
11:41:36 **9** detection limit, and I think we've had samples
11:41:38 **10** like that before.
11:41:40 **11** I think I can think of either Krystal
11:41:45 **12** Kim's two samples and Joanne Anderson's two
11:41:50 **13** samples, I believe one was positive and one was
11:41:53 **14** negative, but they were two different bottles.
11:41:57 **15** Where we have tested the two samples from
11:42:01 **16** the same bottle would be the 1978 historical,
11:42:05 **17** and we found them in both.
11:42:07 **18** **Q.** (By Mr. Chachkes) Okay. I'm not asking
11:42:08 **19** about specific bottles. So listen to the question
11:42:11 **20** I'm asking.
11:42:12 **21** If you had a nondetect on a bottle of J&J
11:42:16 **22** cosmetic talc for asbestos, would you expect,
11:42:21 **23** generally speaking, that if you ran the same test
11:42:23 **24** again, you would get the same result, the non-deduct?
11:42:28 **25** MR. CIRSCH: Object to form.
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11:42:29 **1** THE WITNESS: I don't have any
11:42:30 **2** expectations one way or the other, and I think
11:42:32 **3** we've gone over this. This is the hypothetical
11:42:34 **4** if we analyzed it again, are we going to find
11:42:36 **5** the same thing. It depends on, again, how many
11:42:39 **6** asbestos fibers or bundles were detected the
11:42:41 **7** first time.
11:42:41 **8** If we detect one or two the first time and
11:42:44 **9** do it again and it's zero, that's within the
11:42:46 **10** error rate that you would expect. Or if we
11:42:49 **11** tested again and we find that it's even more,
11:42:53 **12** say three fibers or four fibers.
11:42:56 **13** So you have to look at specifically on
11:42:58 **14** what the first test is, and we're assuming the
11:43:02 **15** first test now is a nondetect, below our
11:43:05 **16** detection limit. And if the second test shows
11:43:07 **17** that there is one or two regulated asbestos
11:43:10 **18** fibers, that wouldn't surprise me.
11:43:12 **19** **Q.** (By Mr. Chachkes) Okay. So let me ask
11:43:15 **20** the question again because you really answered a
11:43:16 **21** different question.
11:43:17 **22** The question is, if you had a bottle of
11:43:19 **23** J&J talc where you had a nondetect. I'm not asking
11:43:23 **24** what your experience is. I'm not asking about a
11:43:25 **25** specific bottle. I'm asking just generally speaking,
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11:43:29 **1** would you expect to have another nondetect if you
11:43:32 **2** were to test it again -- nondetect in the first
11:43:36 **3** instance?
11:43:37 **4** MR. CIRSCH: Object to form.
11:43:38 **5** THE WITNESS: I don't have an expectation
11:43:39 **6** one way or the other. The results are what they
11:43:41 **7** are.
11:43:41 **8** **Q.** (By Mr. Chachkes) Can you make any
11:43:42 **9** assumptions about a bottle of J&J cosmetic talc from
11:43:47 **10** Vermont about the asbestos content without analyzing
11:43:49 **11** the bottle?
11:43:50 **12** **A.** I don't believe you can predict just how
11:43:57 **13** much asbestos is in any particular bottle without
11:44:00 **14** analyzing it.
11:44:02 **15** **Q.** What about the possibility that there's no
11:44:05 **16** asbestos, can you -- if you haven't analyzed a bottle
11:44:10 **17** of J&J talc sourced from Vermont, is it possible that
11:44:15 **18** there's no detectable asbestos?
11:44:18 **19** MR. CIRSCH: Object to form.
11:44:19 **20** THE WITNESS: Again, I don't have
11:44:21 **21** expectations one way or the other. It's either
11:44:25 **22** going to be above, at, or below our detection
11:44:28 **23** limit, depending on the amount of regulated
11:44:30 **24** asbestos that's in that bottle.
11:44:31 **25** **Q.** (By Mr. Chachkes) You're not assuming
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11:44:32 **1** that a nondetect of a J&J bottle of cosmetic talc is
 11:44:38 **2** an incorrect result; correct?
 11:44:40 **3** **A.** I'm sorry, could you repeat that?
 11:44:41 **4** **Q.** Yeah, I didn't do you a favor there, did
 11:44:44 **5** I?
 11:44:47 **6** You don't believe that a nondetect for
 11:44:49 **7** asbestos on a J&J bottle of cosmetic talc means
 11:44:53 **8** you've made an error?
 11:44:55 **9** **MR. CIRSCH:** Object to form.
 11:44:56 **10** **THE WITNESS:** No. It only means that if
 11:44:59 **11** there is regulated asbestos present in that
 11:45:01 **12** bottle, it's below our analytical detection
 11:45:06 **13** limit.
 11:45:07 **14** **Q.** (By Mr. Chachkes) Your report includes
 11:45:10 **15** EDXA spectra for several particles; correct?
 11:45:13 **16** **A.** For --
 11:45:14 **17** **MR. CIRSCH:** Object to form.
 11:45:15 **18** **THE WITNESS:** For several regulated
 11:45:17 **19** asbestos fibers and bundles, yes.
 11:45:19 **20** **Q.** (By Mr. Chachkes) Describe how your
 11:45:20 **21** analysts calibrate your EDXA system.
 11:45:25 **22** **A.** It's calibrated in the QA/QC, I believe,
 11:45:28 **23** every couple of months where a standard is run and
 11:45:30 **24** then they make a determination on its count rates.
 11:45:34 **25** So whatever we have to do for the National Voluntary
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11:45:42 **1** Laboratory Accreditation Program.
 11:45:42 **2** **Q.** Do you keep that data and results on your
 11:45:46 **3** QA/QC?
 11:45:47 **4** **A.** Yes.
 11:45:48 **5** **Q.** Have you ever produced it?
 11:45:49 **6** **A.** No.
 11:45:52 **7** **Q.** How often do they calibrate -- strike
 11:45:57 **8** that.
 11:45:57 **9** Do your analysts compare their EDXA
 11:46:04 **10** spectra to known reference samples, known reference
 11:46:11 **11** spectra?
 11:46:11 **12** **A.** Yes.
 11:46:12 **13** **Q.** And are those spectra from outside MAS or
 11:46:16 **14** generated within MAS?
 11:46:19 **15** **MR. CIRSCH:** Object to form.
 11:46:21 **16** **THE WITNESS:** The reference spectras have
 11:46:24 **17** been generated by MAS.
 11:46:25 **18** **Q.** (By Mr. Chachkes) And do your analysts
 11:46:27 **19** compare their EDXA spectra to any third-party
 11:46:34 **20** reference spectra?
 11:46:42 **21** **A.** Possibly. I mean, there's plenty of
 11:46:47 **22** publications or book chapters in the past on things
 11:46:51 **23** like tremolite, richterite, winchite. Not so much on
 11:46:58 **24** richterite and winchite because it's a mineral that
 11:47:03 **25** nobody seems to have. We believe we have some now,
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11:47:05 **1** but we'll have to check it just to determine the
 11:47:08 **2** sodium concentrations versus the potassium
 11:47:12 **3** concentrations.
 11:47:13 **4** **Q.** Okay. So sitting here today, you don't
 11:47:14 **5** know whether your analysts compare their EDXA spectra
 11:47:17 **6** to third-party standards?
 11:47:19 **7** **A.** No, I didn't say that.
 11:47:20 **8** **MR. CIRSCH:** Object to form.
 11:47:21 **9** **THE WITNESS:** We have our own standards,
 11:47:23 **10** we have the NIST standards. And quite frankly,
 11:47:25 **11** a TEM analyst identifying tremolite and
 11:47:28 **12** anthophyllite or iron-rich anthophyllite is
 11:47:33 **13** almost elementary compared to for people with
 11:47:37 **14** analysts with a lot of experience. We have the
 11:47:40 **15** references.
 11:47:43 **16** If you have any particular issue with any
 11:47:45 **17** particular EDXA spectra that you think has been
 11:47:50 **18** misidentified as one of the regulatory asbestos
 11:47:52 **19** types in these reports, I would be happy to look
 11:47:54 **20** at it and we can discuss it.
 11:47:56 **21** **Q.** (By Mr. Chachkes) I would like you to
 11:47:57 **22** listen carefully to the question.
 11:47:58 **23** The question is: For the EDXA spectra in
 11:48:04 **24** your report, the conclusions made about which mineral
 11:48:06 **25** that is based on the EDX -- which crystal that is
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11:48:10 **1** based on the EDXA spectra, was that done comparing
 11:48:14 **2** the spectra to a third-party standard?
 11:48:16 **3** **MR. CIRSCH:** Object to form.
 11:48:17 **4** **THE WITNESS:** Are you asking a third-party
 11:48:19 **5** standard spectra or a third-party standard
 11:48:23 **6** mineral like NIST?
 11:48:26 **7** **Q.** (By Mr. Chachkes) Okay. How about a
 11:48:29 **8** third-party standard, any third-party standard,
 11:48:32 **9** somebody else other than your lab generated this
 11:48:34 **10** spectra, you used that as a standard?
 11:48:36 **11** **A.** I don't know if we've looked at any other
 11:48:39 **12** third-party spectra other than what has been -- I
 11:48:45 **13** think Jim Millette has published in the past. I know
 11:48:48 **14** we have his stuff. I believe McCrone has also. I
 11:48:53 **15** have to look in the particle analysis if they've done
 11:48:56 **16** that. But typically we rely on the actual minerals
 11:48:59 **17** and the spectras that we've generated in the past
 11:49:01 **18** from the standards.
 11:49:02 **19** **Q.** So the question isn't about whether
 11:49:04 **20** third-party standards exist. I'm talking about the
 11:49:07 **21** functional day-to-day your analysts doing an EDXA
 11:49:11 **22** spectra. Sitting there, does he look over at some
 11:49:15 **23** third-party document, or does he look at an MAS
 11:49:19 **24** internal document to determine this is what I'm
 11:49:21 **25** looking at?
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11:49:22 **1** MR. CIRSCH: Object to form.
11:49:23 **2** THE WITNESS: I doubt he's looking at when
11:49:25 **3** he takes a spectra of either tremolite series or
11:49:28 **4** anthophyllite series that he's turning over and
11:49:31 **5** looking at a known reference. These analysts
11:49:34 **6** have been doing this for years and years and
11:49:37 **7** years.
11:49:37 **8** We have references, but I can't imagine
11:49:43 **9** every time he takes an EDX spectra that looks
11:49:47 **10** the same time after time after time that he's
11:49:49 **11** looking at a third-party reference at that
11:49:51 **12** particular point in time.
11:49:52 **13** Q. (By Mr. Chachkes) Okay. How many
11:49:56 **14** different analysts do you have doing EDXA spectra?
11:49:59 **15** A. Four.
11:49:59 **16** Q. Does NIST have an EDXA reference spectra
11:50:06 **17** for the various asbestos?
11:50:11 **18** MR. CIRSCH: Object to form.
11:50:12 **19** THE WITNESS: I think you already asked
11:50:14 **20** that. And besides not having a -- providing a
11:50:16 **21** TEM photo, they do not provide an actual
11:50:22 **22** spectra. But I think most -- I think there's a
11:50:26 **23** number of third-party references I believe just
11:50:28 **24** give you the ratios of what you would see in
11:50:31 **25** EDXA for the magnesium, the silicon, the
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11:50:37 **1** calcium, potentially some iron, tremolite, or
11:50:41 **2** actinolite.
11:50:43 **3** Q. (By Mr. Chachkes) Why is EDXA useful?
11:50:47 **4** A. Provides the inorganic, and depending on
11:50:52 **5** your detector, organic chemistry of any particular
11:50:56 **6** elongated particulate.
11:50:58 **7** Q. When you look at an EDXA spectra, do you
11:51:03 **8** assume it's a regulated particle and then look to
11:51:07 **9** which regulated particles have the metal-to-silicon
11:51:11 **10** ratio that correspond?
11:51:14 **11** MR. CIRSCH: Object to form.
11:51:15 **12** THE WITNESS: Well, we typically don't do
11:51:18 **13** an EDX spectra unless it meets the definition of
11:51:22 **14** a regulated -- it has the potential for a
11:51:27 **15** regulated asbestos fiber or bundle.
11:51:29 **16** So it's got to be at least .5 micrometers
11:51:33 **17** in length or greater, it's got to have an equal
11:51:36 **18** to -- greater than or equal to 5-to-1 aspect
11:51:41 **19** ratio, and parallel sides. Then the analyst --
11:51:46 **20** first thing I would assume is do EDXA and check
11:51:50 **21** the chemistry. And then SAED.
11:51:55 **22** Q. (By Mr. Chachkes) If your analyst sees
11:51:58 **23** something that's, what did you say, greater than .55
11:52:04 **24** millimeters?
11:52:05 **25** A. Microns.
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11:52:06 **1** Q. Microns, I'm sorry.
11:52:06 **2** A. Micrometers.
11:52:06 **3** Q. Okay. So strike that.
11:52:08 **4** If your analyst sees something that's
11:52:11 **5** greater than .5 micrometers and has an aspect ratio
11:52:14 **6** of at least 5-to-1, then he might do EDXA?
11:52:18 **7** A. If it has parallel sides, yes. And he may
11:52:25 **8** do SAED. It doesn't matter which one. But then he
11:52:29 **9** would have to go through the sequence of determining
11:52:31 **10** if it meets the definition for the regulated asbestos
11:52:35 **11** chemistry and the crystalline structure.
11:52:37 **12** Q. Are there minerals that exist in the world
11:52:40 **13** other than regulated particles, regulated asbestos
11:52:44 **14** particles, that are greater than .5 micrometers and
11:52:50 **15** can have an aspect ratio of greater than 5-to-1?
11:52:53 **16** MR. CIRSCH: Object to form.
11:52:54 **17** Q. (By Mr. Chachkes) And with parallel
11:52:56 **18** sides?
11:52:56 **19** A. Yes.
11:52:56 **20** Q. Potentially dozens if not hundreds; right?
11:53:01 **21** A. I haven't counted them all up. But what
11:53:04 **22** we potentially see is asbestiform talc bundles or
11:53:08 **23** fibers all the time. So, yeah, you have to
11:53:12 **24** distinguish between a talc fiber or bundle and an
11:53:17 **25** anthophyllite fiber or bundle.
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11:53:18 **1** Q. The question really is about minerals, so
11:53:20 **2** let's focus on what I've just asked, which is: There
11:53:25 **3** are potentially dozens if not hundreds of minerals
11:53:29 **4** that can have parallel sides, that can have -- be
11:53:34 **5** bigger than .5 micrometers, and have aspect ratios
11:53:37 **6** that are 5-to-1 or greater?
11:53:39 **7** MR. CIRSCH: Object to form.
11:53:40 **8** THE WITNESS: And I apologize, but I just
11:53:42 **9** stated I haven't counted them up. And really,
11:53:46 **10** we're not interested in the hundreds or whatever
11:53:47 **11** it is around the world.
11:53:49 **12** It's primarily what do we find in the talc
11:53:55 **13** deposits that are asbestiform or fibrous and
11:54:00 **14** meet those definitions. And typically the only
11:54:04 **15** thing we routinely see is fibrous talc. Every
11:54:10 **16** now and then an antigorite fiber may show up.
11:54:16 **17** But I don't -- to answer your question you
11:54:19 **18** asked, I haven't counted how many are out there.
11:54:21 **19** Q. (By Mr. Chachkes) Does MAS conduct
11:54:24 **20** qualitative EDS analysis or quantitative EDS
11:54:27 **21** analysis?
11:54:28 **22** A. I believe every spectra in here is
11:54:31 **23** quantitative EDS analysis.
11:54:33 **24** Q. So you actually calculate the peak sizes
11:54:36 **25** and do the math?
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11:54:37 **1** **A.** We can, but we take the raw data, so that
 11:54:41 **2** has to have at least 300 seconds of collection. But
 11:54:46 **3** it's easy to do. You can actually calculate the
 11:54:51 **4** concentration of the oxides under the peaks. We
 11:54:54 **5** don't normally do that unless it's necessary.
 11:54:58 **6** **Q.** So when you -- just to summarize, when you
 11:55:07 **7** do identification of mineral by EDXA, you are
 11:55:13 **8** assuming that it's not any of the potentially dozens
 11:55:17 **9** or hundreds of other minerals that aren't regulated;
 11:55:22 **10** correct?
 11:55:22 **11** MR. CIRSCH: Object to form.
 11:55:23 **12** THE WITNESS: That's not what I said. I
 11:55:24 **13** said I didn't know them all. But there's no
 11:55:27 **14** minerals out there that has all the
 11:55:29 **15** characteristics of a specific type of a
 11:55:32 **16** regulated asbestos fiber, and that's why you go
 11:55:36 **17** through the analytical process.
 11:55:39 **18** You can get other fibrous materials, but
 11:55:42 **19** they'll have aluminum or the
 11:55:47 **20** magnesium-to-silicon ratios are off. But you
 11:55:50 **21** just don't see that many of these other than
 11:55:53 **22** fibrous talc.
 11:55:54 **23** So of course we don't make an assumption
 11:55:56 **24** what it is. That's why you do the chemistry and
 11:55:59 **25** the selected area electron diffraction.

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11:56:04 **1** **Q.** (By Mr. Chachkes) How many minerals have
 11:56:06 **2** the same constituent elements as regulated asbestos?
 11:56:13 **3** MR. CIRSCH: Object to form.
 11:56:14 **4** THE WITNESS: Don't know.
 11:56:14 **5** **Q.** (By Mr. Chachkes) It could be hundreds?
 11:56:16 **6** MR. CIRSCH: Object to form.
 11:56:17 **7** THE WITNESS: It's not a matter if it has
 11:56:19 **8** the same constituents --
 11:56:21 **9** **Q.** (By Mr. Chachkes) My question was --
 11:56:22 **10** MR. CIRSCH: Hold on. Let him answer the
 11:56:24 **11** question, please.
 11:56:25 **12** THE WITNESS: I haven't -- again, I
 11:56:26 **13** haven't tried to sit down and go through all the
 11:56:28 **14** minerals in the world that may have magnesium,
 11:56:31 **15** silicon, or magnesium, silicon, and calcium.
 11:56:37 **16** What's important is the ratio to the standards
 11:56:40 **17** to the chemistry to the selected area electron
 11:56:44 **18** diffraction.
 11:56:44 **19** MR. CHACHKES: Okay. Let's mark as
 11:56:45 **20** Exhibit 12.
 11:56:45 **21** (Defendants' Exhibit 12 was marked for
 11:56:58 **22** identification.)
 11:56:58 **23** **Q.** (By Mr. Chachkes) This is an extracted
 11:57:00 **24** page from page 132 of your report. Do you recognize
 11:57:05 **25** this as one of your EDXA spectra?

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11:57:08 **1** **A.** I do recognize it.
 11:57:10 **2** **Q.** Okay. Now, up at the top it says -- do
 11:57:13 **3** you see where it says tremolite?
 11:57:14 **4** **A.** Yes.
 11:57:14 **5** **Q.** You typed that in, right, or your lab
 11:57:17 **6** typed that in?
 11:57:19 **7** **A.** After they identified it, yes.
 11:57:21 **8** **Q.** Okay. What's the name of the software you
 11:57:28 **9** use to generate this spectra?
 11:57:31 **10** **A.** You got me there. I don't know the name
 11:57:33 **11** of the software. It's whatever the EDS system is on
 11:57:37 **12** this particular one. It's not a light element
 11:57:39 **13** detector. It comes with the EDXA system. I don't
 11:57:44 **14** know what they call their software.
 11:57:46 **15** **Q.** Do you run the EDXA yourself?
 11:57:49 **16** **A.** Not anymore, no.
 11:57:50 **17** **Q.** Did you run any EDXA for any of the
 11:57:53 **18** samples in the MDL?
 11:58:00 **19** **A.** No, sir.
 11:58:00 **20** **Q.** And walk me through how you determine the
 11:58:03 **21** chemical composition of a -- what you're looking at
 11:58:07 **22** from the spectra.
 11:58:10 **23** MR. CIRSCH: Object to form.
 11:58:11 **24** THE WITNESS: How far back do you want me
 11:58:14 **25** to start?

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11:58:14 **1** **Q.** (By Mr. Chachkes) Well, let me ask you
 11:58:15 **2** this.
 11:58:16 **3** **A.** Electrons hit the solid -- electron beam
 11:58:20 **4** hits the solid with enough energy to eject elements
 11:58:23 **5** out of their orbital.
 11:58:23 **6** **Q.** We're not --
 11:58:26 **7** **A.** You don't want me to go back that far?
 11:58:27 **8** **Q.** No.
 11:58:27 **9** **A.** Okay.
 11:58:27 **10** **Q.** So you look at the areas of the peaks;
 11:58:27 **11** right?
 11:58:30 **12** **A.** No, what we -- we look at the peak ratios,
 11:58:34 **13** the areas -- you can't look at the areas, but the
 11:58:37 **14** peak ratios is what's important here. This is a
 11:58:42 **15** typical tremolite with a small amount of iron, so
 11:58:44 **16** this would not be enough iron to get into the
 11:58:46 **17** actinolite range. There's no potassium. I don't see
 11:58:52 **18** much of a sodium peak, so I would call this just
 11:58:57 **19** tremolite.
 11:58:57 **20** So the electron beam is put on a spot size
 11:59:01 **21** onto the bundle or fiber, and the system essentially
 11:59:04 **22** is turned on and starts collecting x-rays from the
 11:59:08 **23** different energy levels that are consistent with the
 11:59:12 **24** different elements.
 11:59:12 **25** **Q.** Okay. Let's just focus on you said you

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11:59:15 **1** look at the ratios of the peaks; right?
11:59:18 **2** MR. CIRSCH: Object to form.
11:59:19 **3** **Q.** (By Mr. Chachkes) Am I misstating your
11:59:21 **4** testimony?
11:59:21 **5** **A.** No. I guess I'm trying to understand what
11:59:24 **6** you're asking. Maybe you should repeat the question.
11:59:26 **7** **Q.** Okay. You've got a -- I'm not asking how
11:59:30 **8** the machine works. I'm asking you how you take this
11:59:33 **9** result in Exhibit 12 and turn that into a conclusion.
11:59:38 **10** So I'm asking do you look at the ratio of
11:59:43 **11** the peak heights -- is that one of the things you
11:59:47 **12** look at?
11:59:48 **13** **A.** Yes.
11:59:48 **14** **Q.** Okay. What's the ratio you look at
11:59:49 **15** specifically?
11:59:51 **16** MR. CIRSCH: Object to form.
11:59:52 **17** THE WITNESS: You have a magnesium and
11:59:54 **18** calcium peak that are pretty close. Typically
11:59:57 **19** the calcium peak can be a little lower.
11:59:59 **20** If it's a light element detector, the
12:00:01 **21** magnesium can be a little higher, the silicon
12:00:05 **22** will be your primary peak, somewhere in the 25
12:00:09 **23** to 30 percent of the magnesium for a non-light
12:00:10 **24** element detector. And the calcium peaks and the
12:00:15 **25** magnesium peaks are usually very similar in
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12:00:17 **1** size.
12:00:17 **2** And then we look at the amount of iron to
12:00:20 **3** see if we're going to call it actinolite versus
12:00:23 **4** tremolite. And not aware of any other minerals
12:00:27 **5** out there that have those ratios, so that's how
12:00:34 **6** I call it tremolite.
12:00:35 **7** **Q.** (By Mr. Chachkes) When you say ratio,
12:00:36 **8** what are you doing? You're adding, what, the height
12:00:38 **9** of the metals to -- for the numerator and then on the
12:00:43 **10** denominator is the height of the silicon peak?
12:00:47 **11** **A.** We're looking at the silicon peak versus
12:00:49 **12** the magnesium and the calcium peak, and we're looking
12:00:53 **13** at the magnesium and the calcium peak to determine
12:00:56 **14** if -- how much they line up together. It could be a
12:01:00 **15** little higher, it could be lower, but I would call it
12:01:04 **16** typical tremolite peak.
12:01:05 **17** **Q.** And if I --
12:01:06 **18** **A.** Tremolite chemistry.
12:01:08 **19** **Q.** If I want to go to a third-party source
12:01:11 **20** that confirms that this is the appropriate way to
12:01:13 **21** analyze EDXA data, what would you point me to?
12:01:16 **22** MR. CIRSCH: Object to form.
12:01:17 **23** THE WITNESS: I'd have to look through the
12:01:21 **24** protocols, but I believe they give you all the
12:01:24 **25** ratios and say the AHERA, the ISO. They don't
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12:01:28 **1** give you a peak, but they'll write out what the
12:01:31 **2** ratio ranges are.
12:01:33 **3** **Q.** (By Mr. Chachkes) Okay. And those ratios
12:01:35 **4** are -- are they simply the peak height, or do they
12:01:37 **5** take into account the peak area?
12:01:39 **6** **A.** Well, the peak height and the peak area
12:01:43 **7** are consistent. I mean, the peak area is going to --
12:01:50 **8** the peak height is going to depend on the area,
12:01:52 **9** because as the area of the peak builds up, that's
12:01:56 **10** just more counts.
12:01:57 **11** If you change the chemistry,
12:01:59 **12** hypothetically, of, say, tremolite, you have added
12:02:03 **13** more magnesium elements to it, you're going to have
12:02:07 **14** higher peaks, so they're interrelated.
12:02:10 **15** **Q.** Do the standards that you're referring to
12:02:12 **16** refer to simply peak height or they refer to peak
12:02:14 **17** area?
12:02:14 **18** MR. CIRSCH: Object to form.
12:02:15 **19** THE WITNESS: All the standards in the TEM
12:02:17 **20** protocols usually typically just give you
12:02:20 **21** ratios. So I don't -- and if you look in the
12:02:24 **22** identification, usually they will spell it out,
12:02:27 **23** like this is the ratio for tremolite, this is
12:02:29 **24** the ratio for chrysotile, and so on.
12:02:30 **25** **Q.** (By Mr. Chachkes) My question is the
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12:02:31 **1** ratio of what? Is it ratio of just simply height, or
12:02:35 **2** is it ratio of peak area?
12:02:38 **3** **A.** Peak area and peak height are
12:02:40 **4** interchangeable. It's not -- the peak area, if
12:02:44 **5** you're going to calculate the oxides -- the peak
12:02:51 **6** area -- it's not the peak area.
12:02:53 **7** Let's make it simple. It's not the peak
12:02:55 **8** area. It's the peak height.
12:02:57 **9** **Q.** Okay. And that's what the standards say,
12:02:59 **10** peak height?
12:03:00 **11** MR. CIRSCH: Object to form.
12:03:01 **12** THE WITNESS: I believe so.
12:03:01 **13** **Q.** (By Mr. Chachkes) Okay. And one measures
12:03:03 **14** that simply -- you just take a ruler and place it
12:03:06 **15** vertically and you could get a peak height?
12:03:09 **16** **A.** Yeah, you could, if you wanted to.
12:03:11 **17** **Q.** Okay. Do you actually do that
12:03:12 **18** quantitatively with numbers, or do you just kind of
12:03:15 **19** eyeball it?
12:03:17 **20** MR. CIRSCH: Object to form.
12:03:18 **21** THE WITNESS: All the analysts would --
12:03:21 **22** could probably draw that. You know, it's years
12:03:24 **23** and years' experience. You don't have to take
12:03:25 **24** the ratios. And if you look at the standards,
12:03:29 **25** they will look pretty much identical to that.
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12:03:31 **1** But again, you have to be careful if
 12:03:33 **2** you're looking at a windowless detector, which
 12:03:38 **3** is more sensitive for the different elements.
 12:03:39 **4** **Q.** (By Mr. Chachkes) My question is about
 12:03:41 **5** what your analysts actually do. Do they actually
 12:03:43 **6** quantify the heights and run the numbers, or are they
 12:03:46 **7** eyeballing it?
 12:03:49 **8** MR. CIRSCH: Object to form.
 12:03:49 **9** THE WITNESS: I think at this stage of
 12:03:51 **10** their careers they're just visually confirming
 12:03:54 **11** the proper elements and the proper ratios.
 12:03:56 **12** **Q.** (By Mr. Chachkes) And the software can
 12:04:01 **13** generate those numbers; right?
 12:04:04 **14** **A.** The software generates the height? The
 12:04:07 **15** ratios?
 12:04:08 **16** **Q.** Yes.
 12:04:08 **17** **A.** I don't know.
 12:04:09 **18** **Q.** So look at the bottom of Exhibit 12 in the
 12:04:12 **19** bottom left. Do you see how it says magnesium,
 12:04:19 **20** silicon, calcium, iron, down there on the bottom
 12:04:23 **21** left; do you see that?
 12:04:23 **22** **A.** Yes.
 12:04:24 **23** **Q.** You can print out some -- there's data
 12:04:26 **24** that goes there that the software can generate;
25 correct?
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 12:04:29 **1** **A.** That's correct.
 12:04:29 **2** **Q.** Why don't you generate it? Why don't you
 12:04:31 **3** generate it?
 12:04:32 **4** MR. CIRSCH: Object to form.
 12:04:33 **5** THE WITNESS: There's no need to. It's
 12:04:35 **6** not required for this type of analysis to
 12:04:38 **7** identify tremolite.
 12:04:39 **8** **Q.** (By Mr. Chachkes) Do you have that data
 12:04:41 **9** somewhere still saved in a machine somewhere?
 12:04:44 **10** **A.** That, I don't know.
 12:04:45 **11** **Q.** Okay. We are going to request that to be
 12:04:48 **12** produced. I know your machine generates it. So if
 12:04:51 **13** you could see whether you could produce that, we'd
 12:04:54 **14** appreciate it.
 12:04:55 **15** MS. O'DELL: We'll consider your request.
 12:04:58 **16** We're making no commitment we're going to do
 12:05:00 **17** that.
 12:05:00 **18** MR. CHACHKES: Okay.
 12:05:00 **19** **Q.** (By Mr. Chachkes) You don't deliberately
 12:05:01 **20** delete that data, do you?
 12:05:03 **21** MR. CIRSCH: Object to form.
 12:05:04 **22** THE WITNESS: No, sir, I have not
 12:05:05 **23** deliberately deleted that data.
 12:05:07 **24** **Q.** (By Mr. Chachkes) You don't instruct your
 12:05:08 **25** researchers to delete that data, do you?
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12:05:10 **1** MR. CIRSCH: Object to form.
 12:05:11 **2** THE WITNESS: No. It's just not -- that
 12:05:14 **3** data is just not something I'm relying on for my
 12:05:16 **4** opinions in this case.
 12:05:17 **5** **Q.** (By Mr. Chachkes) And that data being the
 12:05:19 **6** specific numerical representation of the peak
 12:05:23 **7** heights?
 12:05:23 **8** MR. CIRSCH: Object to form.
 12:05:24 **9** THE WITNESS: I believe what that gives
 12:05:25 **10** you is the percentage of one element to the
 12:05:27 **11** other, not peak heights.
 12:05:29 **12** **Q.** (By Mr. Chachkes) You're sure of that?
 12:05:31 **13** MR. CIRSCH: Object to form.
 12:05:32 **14** THE WITNESS: Pretty sure.
 12:05:33 **15** **Q.** (By Mr. Chachkes) Okay. But anyway, you
 12:05:37 **16** didn't produce that data in your report, did you?
 12:05:39 **17** MR. CIRSCH: Object to form.
 12:05:39 **18** THE WITNESS: No, sir. It's not something
 12:05:41 **19** that's required to render my opinions in this
 12:05:43 **20** case --
 12:05:44 **21** **Q.** (By Mr. Chachkes) Okay.
 12:05:45 **22** **A.** -- in this MDL.
 12:05:56 **23** MR. CHACHKES: Let's just mark this as
 12:05:57 **24** Exhibit 13.
 12:05:58 **25** (Defendants' Exhibit 13 was marked for
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 12:06:15 **1** identification.)
 12:06:16 **2** **Q.** (By Mr. Chachkes) All right. Look on the
 12:06:19 **3** last page of Exhibit 13. There appears to be an EDXA
 12:06:23 **4** spectra; do you see that?
 12:06:24 **5** **A.** I do.
 12:06:25 **6** **Q.** And it appears to be generated by the same
 12:06:29 **7** software as you're using. All the fonts are the
 12:06:31 **8** same; everything appears to be the same. Do you have
 12:06:34 **9** any opinion on that?
 12:06:34 **10** MR. CIRSCH: Object to form.
 12:06:35 **11** THE WITNESS: No.
 12:06:35 **12** **Q.** (By Mr. Chachkes) All that information on
 12:06:38 **13** the lower left-hand corner in the Exhibit 13, you
 12:06:42 **14** could generate that information; right?
 12:06:44 **15** MR. CIRSCH: Object to form.
 12:06:45 **16** THE WITNESS: I don't know if we have the
 12:06:47 **17** same software, same software upgrades, so I
 12:06:50 **18** can't comment on that.
 12:06:51 **19** **Q.** (By Mr. Chachkes) Can you generate that
 12:06:52 **20** information that's down there in the lower left-hand
 12:06:55 **21** corner --
 12:06:55 **22** MR. CIRSCH: Object to form.
 12:06:56 **23** **Q.** (By Mr. Chachkes) -- on Exhibit 13, last
 12:06:57 **24** page?
 12:06:57 **25** **A.** And I don't mean to be disrespectful, but
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12:07:00 **1** I don't know. I don't know if we have the same
 12:07:02 **2** updated software, et cetera, so I can't say one way
 12:07:05 **3** or the other.
 12:07:05 **4** **Q.** Do you know whether the data you have from
 12:07:13 **5** your EDXA runs allows you to calculate numerical
 12:07:20 **6** values for the weight percentage of the elements?
 12:07:23 **7** **A.** I believe I've just already stated I'm
 12:07:27 **8** not -- I don't know what software system we have and
 12:07:31 **9** can it do that or not.
 12:07:32 **10** **Q.** Okay. And same question, so whether you
 12:07:35 **11** can generate the standard definitions or atomic
 12:07:39 **12** percentages or all those other ones, you just don't
 12:07:43 **13** know one way or the other whether you can calculate
 12:07:46 **14** those numbers using your EDXA apparatus?
 12:07:50 **15** **MR. CIRSCH:** Object to form.
 12:07:51 **16** **THE WITNESS:** It may be possible and we
 12:07:52 **17** may be able to. I just don't know until I ask.
 12:08:01 **18** **Q.** (By Mr. Chachkes) Do you know of any
 12:08:06 **19** third-party published source that approves of
 12:08:11 **20** eyeballing EDXA spectra to determine what the
 12:08:14 **21** composition of the material you're looking at?
 12:08:17 **22** **MR. CIRSCH:** Object to form.
 12:08:17 **23** **THE WITNESS:** Yes.
 12:08:18 **24** **Q.** (By Mr. Chachkes) What?
 12:08:18 **25** **A.** All the assessors that ever walked in our
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12:08:25 **1** lab with the National Voluntary Laboratory
 12:08:26 **2** Accreditation Program do not require anybody to
 12:08:28 **3** measure peak heights and look at ratios for tremolite
 12:08:32 **4** or any of these.
 12:08:35 **5** You may want to make a green analyst who
 12:08:38 **6** hasn't been doing this for a while do that if he has
 12:08:41 **7** some issues, but it's not something that I've ever
 12:08:44 **8** seen the auditors say that is necessary.
 12:08:46 **9** **Q.** Is there any --
 12:08:47 **10** **MR. CIRSCH:** Did you finish your answer?
 12:08:49 **11** **THE WITNESS:** Yes.
 12:08:49 **12** **Q.** (By Mr. Chachkes) Is there any
 12:08:50 **13** peer-reviewed literature that approves of eyeballing
 12:08:54 **14** EDXA patterns to determine the chemical composition
 12:08:57 **15** you're looking at?
 12:08:58 **16** **MR. CIRSCH:** Object to form.
 12:08:59 **17** **Q.** (By Mr. Chachkes) Peer-reviewed
 12:09:00 **18** literature.
 12:09:00 **19** **A.** I don't know of any peer-reviewed
 12:09:02 **20** literature that says that comparing the spectras or
 12:09:07 **21** looking at the spectras and comparing them should not
 12:09:10 **22** be done, that you have to use a ruler for every one
 12:09:13 **23** of them. I'm not aware of any literature that states
 12:09:15 **24** that, peer-reviewed literature.
 12:09:16 **25** **Q.** Not my question. Any peer-reviewed
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12:09:19 **1** literature that says eyeballing it is okay?
 12:09:22 **2** **MR. CIRSCH:** Object to form.
 12:09:23 **3** **THE WITNESS:** I wouldn't put it eyeballing
 12:09:26 **4** comparing to the standards and looking at the
 12:09:28 **5** ratios.
 12:09:29 **6** I'm not aware of any peer-reviewed
 12:09:32 **7** literature that makes that affirmative or
 12:09:34 **8** negative statement one way or the other.
 12:09:36 **9** **Q.** (By Mr. Chachkes) But you are aware of
 12:09:37 **10** peer-reviewed literature that uses actual
 12:09:39 **11** quantitative numbers and calculates the kind of
 12:09:43 **12** information we see in Exhibit 13 which is like weight
 12:09:47 **13** percentages; you're aware of that; right?
 12:09:48 **14** **MR. CIRSCH:** Object to form.
 12:09:50 **15** **THE WITNESS:** For this type of analysis
 12:09:52 **16** where you're just confirming, I'm not aware of
 12:09:56 **17** any. Maybe there is. Show some if you have
 12:10:01 **18** one.
 12:10:01 **19** **Q.** (By Mr. Chachkes) So when you say just
 12:10:03 **20** confirming, you're not using EDXA to determine in a
 12:10:08 **21** vacuum what I'm looking at. You've already made some
 12:10:10 **22** assumptions about what you may be looking at?
 12:10:12 **23** **A.** No, we never make assumptions. We do the
 12:10:15 **24** chemistry, and the chemistry is unique. If you go
 12:10:18 **25** through here -- I was just looking at some. You
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12:10:19 **1** know, hornblende. Well, there's no aluminum in
 12:10:23 **2** tremolite. It's fairly straightforward.
 12:10:26 **3** **Q.** Okay. You don't redact the information
 12:10:38 **4** that's in the lower left-hand corner of what's been
 12:10:41 **5** marked as Exhibit 12; right?
 12:10:44 **6** **A.** No.
 12:10:44 **7** **MR. CIRSCH:** Object to form.
 12:10:45 **8** **Q.** (By Mr. Chachkes) And you've never
 12:10:46 **9** redacted that information, have you?
 12:10:48 **10** **MR. CIRSCH:** Object to form.
 12:10:49 **11** **THE WITNESS:** No.
 12:10:49 **12** **Q.** (By Mr. Chachkes) Were they trained not
 12:10:56 **13** to fill in the lower left-hand corner, your analysts?
 12:11:00 **14** **MR. CIRSCH:** Object to form.
 12:11:01 **15** **THE WITNESS:** They weren't trained one way
 12:11:02 **16** or the other. It's not required for our
 12:11:04 **17** certifications. NVLAP does not require you to
 12:11:09 **18** run weight percentages, oxides, or any of that.
 12:11:11 **19** You have to demonstrate your ability to identify
 12:11:16 **20** regulated asbestos.
 12:11:19 **21** We've never had it be suggested that we
 12:11:22 **22** are misidentifying tremolite in any
 12:11:26 **23** circumstance.
 12:11:27 **24** **Q.** (By Mr. Chachkes) All right. So the
 12:11:38 **25** first step in analyzing an EDXA, though, is to
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12:11:41 **1** determine the ratio of the metals to silicon; right?
 12:11:45 **2** **A.** The first step?
 12:11:46 **3** **Q.** Yeah.
 12:11:47 **4** **A.** The first step -- the first step is to
 12:11:50 **5** take the spectra and to verify that it is one of the
 12:11:56 **6** regulated asbestos minerals -- regulated asbestos
 12:12:02 **7** types that is of issue, or any issue, for any of
 12:12:06 **8** them.
 12:12:06 **9** **Q.** Do you conclude you're looking at a
 12:12:09 **10** regulated asbestos prior to doing the ratio analysis?
 12:12:14 **11** **A.** No.
 12:12:15 **12** **Q.** Okay. So prior to determining there's --
 12:12:19 **13** what you're looking at, what kind of mineral you're
 12:12:21 **14** looking at, you determine the ratio of the metals to
 12:12:26 **15** silicon; is that correct?
 12:12:28 **16** **A.** Before anything is done, we take the
 12:12:30 **17** microchemistry of an individual fiber and look at the
 12:12:34 **18** typical elements that you would expect.
 12:12:38 **19** **Q.** You seem to not want to answer about the
 12:12:40 **20** EDXA.
 12:12:41 **21** **MR. CIRSCH:** I don't think he was finished
 12:12:43 **22** answering it.
 12:12:43 **23** **Q.** (By Mr. Chachkes) All right. I'm talking
 12:12:44 **24** about the EDXA.
 12:12:45 **25** **A.** That's what I'm saying.
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12:12:46 **1** **Q.** So you've got the EDXA result in your
 12:12:50 **2** hands. This result, 12, before you've determined
 12:12:54 **3** what it is, is the first step determining the ratio
 12:12:57 **4** of metals to silicon --
 12:12:59 **5** **MR. CIRSCH:** Object to form.
 12:13:00 **6** **Q.** (By Mr. Chachkes) -- to interpret this
 12:13:01 **7** EDXA?
 12:13:02 **8** **A.** The first step would be to look at this
 12:13:04 **9** EDXA -- and I'm just speaking for me -- and I would
 12:13:07 **10** see that the ratios are consistent with what I would
 12:13:12 **11** expect for tremolite from the standards. That would
 12:13:15 **12** be my first step.
 12:13:17 **13** **Q.** But you don't know whether those ratios
 12:13:20 **14** are consistent with other minerals as well that are
 12:13:22 **15** non-regulated?
 12:13:25 **16** **MR. CIRSCH:** Object to form.
 12:13:26 **17** **THE WITNESS:** I'm not aware of any ratios
 12:13:28 **18** like that for any other non-regulated fibrous
 12:13:31 **19** minerals.
 12:13:33 **20** **Q.** (By Mr. Chachkes) Are you excluding the
 12:13:34 **21** possibility that they exist, or you're saying you're
 12:13:36 **22** just not aware?
 12:13:37 **23** **A.** We've never seen them, so I guess I'm
 12:13:41 **24** excluding the possibility that they exist.
 12:13:44 **25** **Q.** Okay.
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12:13:45 **1** **A.** It's hard to prove a negative, but it is
 12:13:48 **2** not one of the look-alikes of that type of ratio
 12:13:52 **3** that's fibrous. And of course we're leaving out the
 12:13:55 **4** SAED to make sure it has an amphibole type
 12:13:59 **5** diffraction pattern.
 12:14:00 **6** **Q.** Prior to any EDXA, you've already
 12:14:04 **7** determined it's an amphibole?
 12:14:05 **8** **A.** No. Nothing is determined about this
 12:14:07 **9** particular structure other than it's fibrous, it
 12:14:15 **10** meets the counting criteria for what would be a
 12:14:19 **11** regulated asbestos fiber if in fact the chemistry in
 12:14:23 **12** the crystalline structure are consistent with the
 12:14:27 **13** appropriate mineral.
 12:14:29 **14** **Q.** Okay. You would agree that two different
 12:14:34 **15** minerals can have similar EDXA readouts; correct?
 12:14:38 **16** **MR. CIRSCH:** Object to form.
 12:14:39 **17** **THE WITNESS:** It depends on what you mean
 12:14:40 **18** by similar. I can't answer that hypothetical.
 12:14:46 **19** **Q.** (By Mr. Chachkes) Okay. So, for example,
 12:14:52 **20** anthophyllite and cummingtonite have similar EDXA
 12:14:56 **21** spectra; correct?
 12:14:57 **22** **A.** That's correct. Anthophyllite, depending
 12:15:01 **23** on the iron content, anthophyllite, cummingtonite,
 12:15:07 **24** two regulated asbestos types, yes, they can have
 12:15:10 **25** similar EDS.
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12:15:11 **1** **Q.** Okay. When you say EDS, you mean the same
 12:15:16 **2** thing as EDXA?
 12:15:18 **3** **A.** Correct. I'm sorry. I'm old, and that's
 12:15:20 **4** what we learned back in graduate school, it was EDS.
 12:15:24 **5** It's hard for me to go to EDXA.
 12:15:26 **6** **Q.** All right. So you discussed your first
 12:15:27 **7** step is to make some conclusions about what you're
 12:15:28 **8** looking at just by eyeballing it.
 12:15:30 **9** The next step, do you determine the ratios
 12:15:33 **10** of the metals to the silicon?
 12:15:35 **11** **MR. CIRSCH:** Object to form.
 12:15:36 **12** **THE WITNESS:** Well, let's back up here. I
 12:15:38 **13** don't make any conclusions by eyeballing it.
 12:15:41 **14** The first thing we do is look at it and
 12:15:44 **15** say this could match the counting rules for a
 12:15:48 **16** regulated elongated particle.
 12:15:48 **17** It's at least greater than .5 micrometers
 12:15:51 **18** in length. These are measurements. These are
 12:15:53 **19** not eyeballing. It has parallel sides and has
 12:15:56 **20** at least a 5-to-1 aspect ratio or greater.
 12:16:00 **21** Then the EDXA for me is taken to see if it
 12:16:07 **22** is consistent with the ratios and patterns I
 12:16:11 **23** would expect for some -- for the types of
 12:16:13 **24** regulated asbestos fibers we're looking at.
 12:16:15 **25** And we're not saying, okay, we're going to
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12:16:18 **1** eliminate this type or that type. It's
12:16:21 **2** whatever's present.
12:16:22 **3** Then the SAED -- so it has a typical
12:16:25 **4** amphibole diffraction pattern. If it's
12:16:27 **5** anthophyllite, potentially, we'll rotate the
12:16:30 **6** stage 10 to 20 degrees to eliminate the
12:16:33 **7** once-in-a-blue-moon reflection of a fibrous talc
12:16:37 **8** that some people claim that's close to
12:16:39 **9** anthophyllite.
12:16:40 **10** And after all that, then we would -- I
12:16:43 **11** would say that is a regulated asbestos fiber
12:16:46 **12** type. It meets all the criteria.
12:16:49 **13** You keep saying eyeballing. That's not
12:16:52 **14** really much of a term --
12:16:54 **15** **Q.** (By Mr. Chachkes) My questions are all
12:16:55 **16** about --
12:16:58 **17** MR. CIRSCH: Wait, he's not finished.
12:16:59 **18** THE WITNESS: Wait. I'm not done.
19 MR. CIRSCH: You cut him off.
20 THE REPORTER: Wait. Wait. Wait.
21 THE WITNESS: What we're doing is we're
12:17:01 **22** looking at a set criteria. No decisions are
12:17:02 **23** made ahead of time. Nothing is -- well, I
12:17:07 **24** believe it's that type of thing. That doesn't
12:17:08 **25** happen.
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12:18:02 **1** tagged for silicon, magnesium, calcium, iron, or
12:18:07 **2** whatever it happens to be, and the ratios are
12:18:09 **3** fairly distinct compared to any other mineral
12:18:11 **4** that I know out there, unless it's winchite or
12:18:15 **5** richterite, and then we're looking at a little
12:18:17 **6** bit of potassium or sodium.
12:18:21 **7** **Q.** (By Mr. Chachkes) Okay. When you say the
12:18:21 **8** ratios come up quick, do you mean a precise number
12:18:23 **9** comes up on some screen?
12:18:24 **10** **A.** This ratio -- magnesium, silicon, calcium,
12:18:30 **11** and iron -- is almost instantaneous. The only thing
12:18:33 **12** that changes as you count, they all simultaneously
12:18:39 **13** get higher. There is nothing else to it. You look
12:18:41 **14** at that, you compare to the regulated standards, and
12:18:46 **15** they all match.
12:18:47 **16** **Q.** Okay. Looking at Exhibit 12, tell me what
12:18:50 **17** the ratios are there.
12:18:54 **18** MR. CIRSCH: Object to form.
12:18:55 **19** THE WITNESS: Say silicon is 10.
12:18:59 **20** Magnesium and calcium is approximately 3. The
12:19:05 **21** iron there would be less than 1.
12:19:08 **22** **Q.** (By Mr. Chachkes) Okay. And that's how
12:19:10 **23** you kind of do it in the real world when you're
12:19:13 **24** analyzing EDXA spectra?
12:19:16 **25** MR. CIRSCH: Object to form.
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12:17:08 **1** **Q.** (By Mr. Chachkes) Let's start again. I'm
12:17:10 **2** only asking questions about EDXA.
12:17:12 **3** Can you agree with me not to answer about
12:17:14 **4** TEM or SAED to the following sets of questions? I
12:17:19 **5** just want to know how you do EDXA. Can you do that?
12:17:24 **6** MR. CIRSCH: Object to form.
12:17:25 **7** THE WITNESS: I've already explained that
12:17:26 **8** to you.
12:17:26 **9** **Q.** (By Mr. Chachkes) Okay. But can you
12:17:27 **10** answer these following questions only referring to
12:17:28 **11** EDXA? Can you do me that favor?
12:17:30 **12** **A.** No.
12:17:31 **13** **Q.** Okay.
12:17:31 **14** **A.** If I feel that the question needs more
12:17:33 **15** explanation, an answer needs more explanation, I
12:17:36 **16** believe that's my right.
12:17:37 **17** **Q.** Okay. You get the EDXA printout. At what
12:17:40 **18** point, if at all, do you calculate the ratio of
12:17:44 **19** metals to silicon for the EDXA?
12:17:48 **20** MR. CIRSCH: Object to form.
12:17:49 **21** THE WITNESS: I've already gone over that.
12:17:50 **22** I can't say anything more.
12:17:53 **23** If I'm sitting at the TEM, I'm looking at
12:17:56 **24** the monitor and I'm determining -- and the
12:17:59 **25** ratios come up fairly quick. We have them
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12:19:16 **1** THE WITNESS: In the real world we have
12:19:17 **2** standards, and after doing it thousands and
12:19:20 **3** thousands of times, that's how it's done.
12:19:24 **4** **Q.** (By Mr. Chachkes) Okay. Basically the
12:19:25 **5** way you just did it, I'm putting aside that you may
12:19:28 **6** have an encyclopedic knowledge of what to compare the
12:19:31 **7** ratios to. You generate ratios the way you've just
12:19:36 **8** done it, you look at it and you just read it and you
12:19:39 **9** come up with the ratios?
12:19:41 **10** MR. CIRSCH: Object to form.
12:19:42 **11** THE WITNESS: I'm not generating ratios.
12:19:44 **12** The tremolite fiber or bundle is generating the
12:19:47 **13** ratios by the x-rays that are being generated
12:19:51 **14** from the electron beam that are being counted at
12:19:54 **15** specific energies. Those ratios are fairly
12:19:57 **16** standard.
12:19:58 **17** What I do is interpret the overall pattern
12:20:02 **18** and determine how well it matches with the
12:20:04 **19** tremolite standards that are in each of the TEM
12:20:07 **20** rooms.
12:20:07 **21** **Q.** (By Mr. Chachkes) That step in the EDXA
12:20:11 **22** analysis where you determine the ratios, do you do it
12:20:15 **23** in the real world like we just saw now, you look at
12:20:22 **24** the spectra and you say, okay, silicon 10, magnesium,
12:20:24 **25** calcium 3, iron 1-ish, is that how you do it in the
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12:20:26 **1** real world?
12:20:27 **2** MR. CIRSCH: Object to form.
12:20:28 **3** THE WITNESS: In the real world I don't --
12:20:31 **4** I look at the overall pattern, and the overall
12:20:35 **5** pattern is unique with the -- then it's an
12:20:39 **6** amphibole asbestos. And that's how every
12:20:43 **7** asbestos TEM lab in the country does it.
12:20:45 **8** Q. (By Mr. Chachkes) Okay. So does the
12:20:51 **9** ratios of metal to silicon in the EDXA analysis have
12:20:57 **10** a material impact on your conclusions about what
12:21:00 **11** you're looking at?
12:21:02 **12** MR. CIRSCH: Object to form.
12:21:03 **13** THE WITNESS: The elemental spectras
12:21:06 **14** always have a material impact on what I'm
12:21:08 **15** looking at in the EDXA.
12:21:10 **16** Q. (By Mr. Chachkes) I didn't ask about
12:21:11 **17** that. I asked about the specific ratio of metals to
12:21:15 **18** silicon.
12:21:16 **19** Does that particular numerical ratio have
12:21:20 **20** a material impact on how you conclude what you're
12:21:23 **21** looking at under the EDXA?
12:21:25 **22** MR. CIRSCH: Object to form.
12:21:26 **23** THE WITNESS: I don't understand the
12:21:27 **24** question. I think I've answered it over and
12:21:29 **25** over. I'll answer it one more time.
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12:21:32 **1** Q. (By Mr. Chachkes) No, no. I want to make
12:21:33 **2** sure you understand it.
12:21:34 **3** Do you understand what I mean by the ratio
12:21:36 **4** of metals to silicon; do you understand that?
12:21:39 **5** A. Yes, sir.
12:21:40 **6** Q. Okay. Do you calculate that number in
12:21:45 **7** your head, write it down, print it out? Do you
12:21:48 **8** calculate that number?
12:21:50 **9** MR. CIRSCH: Object to form.
12:21:51 **10** THE WITNESS: I don't know how I do it.
12:21:56 **11** Tremolite, the ratios to magnesium, silicon, and
12:22:00 **12** calcium are fairly unique. Not aware of any
12:22:03 **13** other fibrous materials that will have those
12:22:06 **14** specific ratios without some other additional
12:22:08 **15** elements such as aluminum and an amphibole
12:22:12 **16** diffraction pattern.
12:22:13 **17** Q. (By Mr. Chachkes) Okay. You keep
12:22:15 **18** answering a different question, but what I heard is
12:22:16 **19** that you don't calculate the ratio. You actually run
12:22:20 **20** the numbers and calculate the ratios of metal to
12:22:23 **21** silicon; is that correct? You don't run that number?
12:22:25 **22** MR. CIRSCH: Object to form.
12:22:26 **23** THE WITNESS: I look at -- when I'm doing
12:22:28 **24** this, I look at every pattern and compare it to
12:22:32 **25** the standard patterns for those three elements,
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12:22:35 **1** and then the iron depends on if we're going to
12:22:40 **2** call it actinolite or tremolite. That's how I
12:22:42 **3** do it.
12:22:43 **4** Q. (By Mr. Chachkes) Okay. Do you calculate
12:22:44 **5** the ratio of metals to silicon? Do you do that?
12:22:47 **6** MR. CIRSCH: Object to form.
12:22:49 **7** THE WITNESS: I think I've told you at
12:22:53 **8** least a half hour ago that I don't get a ruler
12:22:56 **9** out and measure each of the primary elements
12:22:58 **10** we're dealing with here, magnesium, silicon and
12:23:03 **11** calcium. I look at these distinct patterns,
12:23:06 **12** EDXA patterns, and can look at that and tell you
12:23:10 **13** that that is what matches for regulated
12:23:13 **14** tremolite asbestos.
12:23:14 **15** Q. (By Mr. Chachkes) Okay. Putting aside
12:23:15 **16** that you don't get a ruler out, do you kind of sort
12:23:20 **17** of estimate that ratio of metals to silicon in your
12:23:24 **18** head when you do this analysis?
12:23:25 **19** MR. CIRSCH: Alex, he's answered this
12:23:27 **20** question a number of times.
12:23:28 **21** MR. CHACHKES: No, he said he doesn't take
12:23:30 **22** out a ruler.
12:23:31 **23** MR. CIRSCH: A number of different times
12:23:32 **24** he's testified as to how he does the process.
12:23:34 **25** I'll let him answer it one more time and then
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12:23:37 **1** I'm going to instruct him not to answer --
12:23:38 **2** MR. CHACHKES: You're at perfect liberty
12:23:40 **3** to shut the questions down at any point.
12:23:41 **4** MR. CIRSCH: I know. I'm going to let him
12:23:42 **5** do it one more time.
12:23:42 **6** MR. CHACHKES: Okay.
12:23:42 **7** Q. (By Mr. Chachkes) Do you estimate --
12:23:42 **8** putting aside whether you use a ruler or not to make
12:23:45 **9** it exact, do you estimate the ratio of metal to
12:23:48 **10** silicon in the EDXA spectra?
12:23:50 **11** A. For at least the tenth time, and my last
12:23:53 **12** time, when I generate a spectra of -- and I'll just
12:23:59 **13** call it right now suspected regulated tremolite, I
12:24:03 **14** look at the overall pattern for magnesium, silicon,
12:24:07 **15** and calcium and determine that it is consistent with
12:24:11 **16** the standards, and that's how I make that
12:24:14 **17** determination.
12:24:14 **18** Q. And is that overall pattern that you say
12:24:16 **19** you look at, is that the ratio of metals to silicon?
12:24:21 **20** A. I am not answering this question anymore.
12:24:24 **21** MR. CIRSCH: Object to form. That's it.
12:24:25 **22** Q. (By Mr. Chachkes) All right. So you will
12:24:26 **23** not answer that question?
12:24:28 **24** A. I've answered the question I'm estimating
12:24:31 **25** at least ten times.
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<p>101</p> <p>12:24:33 1 Q. Okay. And you won't come back at some</p> <p>12:24:36 2 point and say, yes, indeed, I calculate a number that</p> <p>12:24:41 3 is the ratio of metals to silicon. You won't come</p> <p>12:24:43 4 back and say that, will you?</p> <p>12:24:43 5 MR. CIRSCH: Object to form.</p> <p>12:24:44 6 Don't answer the question, Dr. Longo.</p> <p>12:24:45 7 Move on, please, Counsel.</p> <p>12:24:47 8 Q. (By Mr. Chachkes) Okay. Is the ratio of</p> <p>12:24:52 9 metals to silicon for tremolite the same for every</p> <p>12:24:55 10 EDXA printout?</p> <p>12:25:00 11 A. I think I've already gone over it a couple</p> <p>12:25:04 12 of times that depending on your detector, your EDXA</p> <p>12:25:08 13 detector, if it is a silicon drifted, lithium drifted</p> <p>12:25:13 14 window or windowless detector, these ratios will</p> <p>12:25:17 15 change because it's more sensitive.</p> <p>12:25:19 16 For example, for chrysotile, even though</p> <p>12:25:21 17 there is more magnesium in the formula than silicon,</p> <p>12:25:28 18 regular -- with a silicon window you will see less</p> <p>12:25:32 19 magnesium. So it just depends on the EDS system.</p> <p>12:25:38 20 We have both types. So you could see a</p> <p>12:25:40 21 tremolite spectra from the windowless detector that</p> <p>12:25:45 22 will look different than the other one as you're</p> <p>12:25:47 23 getting ready to pull out.</p> <p>12:25:48 24 Q. Are you aware that anthophyllite has a</p> <p>12:25:51 25 ratio in the books published to be 7 to 8 for metals</p> <p>Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>	<p>103</p> <p>12:26:49 1 tremolite has a published ratio for EDXA metals to</p> <p>12:26:52 2 silicon of 5-to-8?</p> <p>12:26:55 3 MR. CIRSCH: Object to form.</p> <p>12:26:55 4 THE WITNESS: Published where?</p> <p>12:26:57 5 MR. CIRSCH: Yeah, will you show him the</p> <p>12:26:58 6 document if your --</p> <p>12:26:59 7 Q. (By Mr. Chachkes) Are you aware of any</p> <p>12:27:00 8 publication that has that?</p> <p>12:27:01 9 A. I don't know. Show me the publication and</p> <p>12:27:03 10 I'll take a look at it, and I'll have to look at what</p> <p>12:27:07 11 conditions this ratio is for what type of detector.</p> <p>12:27:11 12 Q. Okay. So sitting here today, you can't</p> <p>12:27:14 13 point me to a peer-reviewed publication that has</p> <p>12:27:17 14 anything other than a 5-to-8 ratio for tremolite?</p> <p>12:27:24 15 MR. CIRSCH: Object to form. You're</p> <p>12:27:26 16 holding something in your hand. Why don't you</p> <p>12:27:28 17 show --</p> <p>12:27:28 18 THE WITNESS: I don't know. I'd have to</p> <p>12:27:29 19 look at the publication. We look at the NIST</p> <p>12:27:31 20 standards for determining if we have tremolite,</p> <p>12:27:34 21 anthophyllite, anthophyllite solid solution</p> <p>12:27:37 22 series, the tremolite solid solution series.</p> <p>12:27:39 23 Q. (By Mr. Chachkes) Do the NIST standards</p> <p>12:27:41 24 have ratios of metals to silicon?</p> <p>12:27:43 25 A. The NIST -- as I think we already talked</p> <p>Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>
<p>102</p> <p>12:25:56 1 to silicon? Are you aware of that?</p> <p>12:25:58 2 MR. CIRSCH: Object to form.</p> <p>12:25:58 3 THE WITNESS: I don't know. I would have</p> <p>12:25:59 4 to look at it.</p> <p>12:26:00 5 Q. (By Mr. Chachkes) Okay. And you're not</p> <p>12:26:02 6 looking to see whether there's a ratio of 7 to 8</p> <p>12:26:05 7 metals to silicon, are you?</p> <p>12:26:07 8 MR. CIRSCH: Object to form.</p> <p>12:26:08 9 THE WITNESS: For anthophyllite, we look</p> <p>12:26:10 10 at the EDXA standards, typically the NIST</p> <p>12:26:16 11 standards, for that pattern -- I've already told</p> <p>12:26:18 12 you I don't get out a ruler and measure these --</p> <p>12:26:22 13 that the spectra has to be consistent, and it</p> <p>12:26:25 14 has to be for the type of EDXA detector you're</p> <p>12:26:29 15 using.</p> <p>12:26:29 16 Q. (By Mr. Chachkes) It's a very simple</p> <p>12:26:31 17 question. Do you look for a 7 to 8 ratio metals to</p> <p>12:26:35 18 silicon --</p> <p>12:26:35 19 MR. CIRSCH: Object to form.</p> <p>12:26:36 20 THE WITNESS: And it's a very simple</p> <p>12:26:38 21 answer. We look at the standard NIST type</p> <p>12:26:40 22 spectras that give you the patterns for</p> <p>12:26:42 23 potentially anthophyllite or potentially fibrous</p> <p>12:26:46 24 talc.</p> <p>12:26:48 25 Q. (By Mr. Chachkes) Are you aware that</p> <p>Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>	<p>104</p> <p>12:27:45 1 about, I don't believe the NIST standards sends you</p> <p>12:27:47 2 any information other than this is tremolite or this</p> <p>12:27:49 3 is anthophyllite or this is actinolite or this is</p> <p>12:27:53 4 crocidolite or this is amosite.</p> <p>12:27:54 5 Q. Okay.</p> <p>12:27:54 6 MR. CIRSCH: As soon as you get to a good</p> <p>12:27:56 7 place, Alex, maybe we can take a lunch break.</p> <p>12:27:59 8 MR. CHACHKES: Okay.</p> <p>12:27:59 9 Q. (By Mr. Chachkes) Do you know what the</p> <p>12:27:59 10 International Mineralogical Association is, the IMA?</p> <p>12:28:04 11 A. I don't know.</p> <p>12:28:06 12 Q. Okay. Are you aware -- so I guess you</p> <p>12:28:10 13 wouldn't be aware they contain a comprehensive list</p> <p>12:28:14 14 of minerals in their chemical formulas?</p> <p>12:28:16 15 MR. CIRSCH: Object to form.</p> <p>12:28:17 16 THE WITNESS: I'm sure they do.</p> <p>12:28:18 17 Q. (By Mr. Chachkes) Have you ever looked at</p> <p>12:28:20 18 that?</p> <p>12:28:20 19 A. I don't know.</p> <p>12:28:29 20 Q. Okay. So would you agree with the</p> <p>12:28:31 21 statement that talc and anthophyllite have materially</p> <p>12:28:35 22 similar chemistries so it can be difficult to</p> <p>12:28:38 23 distinguish them on EDXA?</p> <p>12:28:41 24 MR. CIRSCH: Object to form.</p> <p>12:28:42 25 THE WITNESS: Yes and maybe.</p> <p>Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>

12:28:45 **1** Q. (By Mr. Chachkes) Okay. What part is
12:28:46 **2** yes?
12:28:47 **3** A. Yes, they have similar chemical makeup.
12:28:50 **4** Q. And maybe they can be difficult to
12:28:52 **5** distinguish on EDXA?
12:28:53 **6** A. Maybe, depending on the chemistry. But we
12:29:00 **7** don't distinguish fibrous talc from anthophyllite by
12:29:05 **8** just EDXA.
12:29:06 **9** Q. Okay. Am I correct that it can be
12:29:09 **10** difficult under EDXA to distinguish anthophyllite
12:29:14 **11** from talc?
12:29:16 **12** MR. CIRSCH: Object to form.
12:29:17 **13** THE WITNESS: I don't know about how
12:29:18 **14** difficult or not difficult. It's not something
12:29:20 **15** we do to distinguish anthophyllite from talc
12:29:22 **16** just on the EDXA other than, okay, it has the
12:29:25 **17** appropriate chemistry.
12:29:28 **18** MR. CHACHKES: Okay. We can take a break
12:29:32 **19** here. Lunchtime.
12:29:33 **20** (Lunch recess from 12:29 p.m. to 1:35 p.m.)
13:36:03 **21** Q. (By Mr. Chachkes) Dr. Longo, you had
13:37:02 **22** mentioned before that you had looked at industrial
13:37:05 **23** talc for asbestos; is that correct?
13:37:06 **24** A. Yes.
13:37:07 **25** Q. And for whom did you do that work?
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13:37:10 **1** A. For whom? Which plaintiffs' attorney?
13:37:13 **2** Q. Sure.
13:37:14 **3** A. I don't recall.
13:37:18 **4** Q. For what client, company, did you do that
13:37:20 **5** work?
13:37:21 **6** A. I haven't done any work for any client
13:37:29 **7** companies that I'm at liberty to talk about for
13:37:38 **8** industrial talc.
13:37:45 **9** Q. Okay. I'm just asking you yes or no, do
13:37:48 **10** you remember the names of the companies or company?
13:37:50 **11** A. I can't talk about any potential work we
13:37:53 **12** may or may not have done for an industrial talc
13:37:56 **13** company.
13:37:56 **14** Q. No, this is just a yes or no. Do you
13:37:58 **15** remember the name? I'm not asking for the name, just
13:38:01 **16** do you remember the name?
13:38:03 **17** A. Again, I'm not saying I have or I haven't.
13:38:06 **18** I'm just not at liberty if I have and if no report
13:38:10 **19** has been issued, at liberty to talk about it.
13:38:13 **20** Q. Okay. You mentioned that you might have
13:38:15 **21** looked at industrial talc for plaintiff lawyers. Was
13:38:18 **22** that recent?
13:38:19 **23** A. I think the most recent one was back in
13:38:21 **24** 2017 for the Kazan firm.
13:38:24 **25** Q. Okay. And you just don't know whether
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13:38:26 **1** that was associated with a particular company?
13:38:30 **2** A. Oh, the company, it was Nyalta Vanderbilt
13:38:35 **3** talc.
13:38:35 **4** Q. Okay. But this is plaintiffs' side?
13:38:39 **5** A. Yes, sir.
13:38:39 **6** Q. What about the first time you ever looked
13:38:43 **7** at industrial talc for asbestos, when was that?
13:38:45 **8** A. As I testified earlier, sometime in the
13:38:47 **9** 1990s or early 2000s.
13:38:50 **10** Q. Was that one engagement? Multiple
13:38:56 **11** engagements?
13:38:57 **12** A. I don't recall.
13:38:58 **13** Q. It could be one engagement; you just don't
13:39:00 **14** remember?
13:39:01 **15** A. I'm sure it's more, but I just don't
13:39:02 **16** recall.
13:39:03 **17** Q. Greater than five? Less than five?
13:39:05 **18** A. I don't know what size bread box it is.
13:39:09 **19** Q. Okay. So you've established probably more
13:39:12 **20** than one, but after that you can't say?
13:39:14 **21** A. I just don't recall.
13:39:15 **22** Q. Okay. What about more than one; you can
13:39:17 **23** say it's more than one?
13:39:19 **24** MR. CIRSCH: Object to form.
13:39:20 **25** THE WITNESS: I believe so.
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13:39:21 **1** Q. (By Mr. Chachkes) Okay. And did you
13:39:22 **2** personally do the TEM work on that?
13:39:23 **3** A. Back in those days, probably.
13:39:27 **4** Q. Did you do any -- personally do any PLM
13:39:30 **5** work?
13:39:30 **6** A. No.
13:39:30 **7** Q. Personally do any XRD work?
13:39:32 **8** A. No.
13:39:32 **9** Q. Personally do any EDXA work?
13:39:35 **10** A. Well, when I do TEM for this type of work,
13:39:38 **11** I would have done EDXA.
13:39:40 **12** Q. Okay. Can you estimate in that engagement
13:39:44 **13** or engagements in the 1990s, early 2000s range, how
13:39:49 **14** many hours you would have spent?
13:39:51 **15** A. No.
13:39:52 **16** Q. Could be under ten; could be over ten?
13:39:55 **17** A. I don't recall.
13:39:56 **18** Q. You know who McCrone is; right?
13:39:59 **19** A. I do.
13:40:00 **20** Q. You know they have people there who teach
13:40:02 **21** graduate courses related to detecting asbestos?
13:40:05 **22** MR. CIRSCH: Object to form.
13:40:06 **23** THE WITNESS: I know they have continuing
13:40:10 **24** education courses, yes.
13:40:11 **25** Q. (By Mr. Chachkes) Have you ever taught at
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13:40:12 **1** a graduate school?
13:40:14 **2** **A.** Not in this type of work, no.
13:40:16 **3** **Q.** Okay. In what type of work?
13:40:19 **4** **A.** Well, I was visiting assistant professor,
13:40:21 **5** so it would have been materials science.
13:40:23 **6** **Q.** Okay. Nothing to do with detecting
13:40:24 **7** asbestos?
13:40:25 **8** **A.** No.
13:40:25 **9** **Q.** Do you know McCrone's Particle Atlas?
13:40:28 **10** **A.** Yes.
13:40:28 **11** **Q.** And that's something folks other than
13:40:31 **12** McCrone use as a standard in this field?
13:40:36 **13** **A.** Yes.
13:40:36 **14** **Q.** Have you ever published anything that
13:40:39 **15** other people outside of your lab use as a standard?
13:40:43 **16** **MR. CIRSCH:** Object to form.
13:40:45 **17** **THE WITNESS:** Not in a book, no.
13:40:47 **18** **Q.** (By Mr. Chachkes) What about otherwise?
13:40:50 **19** **A.** Yes, if you go to Federal Mogul's and
13:40:54 **20** search for wollastonite detection, one of our
13:40:58 **21** protocols was published by them for the determination
13:41:02 **22** of tremolite asbestos in wollastonite for Federal
13:41:07 **23** Mogul involving their manufacture of OEM brakes.
13:41:11 **24** **Q.** What is Federal Mogul? I'm not familiar
13:41:12 **25** with that.
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13:41:12 **1** **A.** It's a company that owns a bunch of
13:41:14 **2** companies.
13:41:14 **3** **Q.** Okay. So you published -- I'm sorry, say
13:41:20 **4** it again. What does it stand for?
13:41:22 **5** **A.** Well, I didn't publish it. We wrote a
13:41:25 **6** protocol for determining a problem they were having
13:41:29 **7** with the supplier of a mineral called wollastonite,
13:41:29 **8** which is a substitute fibrous material, and the
13:41:31 **9** particular source that they were using stated that it
13:41:36 **10** had a small amount of tremolite contamination in it.
13:41:38 **11** **Q.** Okay. Did you ever published a standard
13:41:40 **12** for finding asbestos that was for the general
13:41:44 **13** scientific community, not for just one specific
13:41:49 **14** client?
13:41:49 **15** **MR. CIRSCH:** Object to form.
13:41:50 **16** **THE WITNESS:** I was in charge of the ASTM
13:41:52 **17** and the D2205 committee for the analysis of --
13:41:57 **18** number count analysis of asbestos in settled
13:42:01 **19** dust. It's the D5755, I believe it is.
13:42:05 **20** **Q.** (By Mr. Chachkes) Okay. And that has
13:42:08 **21** your name on it?
13:42:09 **22** **A.** No. ASTM standards have ASTM on it.
13:42:13 **23** **Q.** Okay. And that was -- that standard --
13:42:16 **24** the contributors were many more people than you;
25 right?
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13:42:19 **1** **A.** Yes. Some people contributed, but I was
13:42:22 **2** in charge of -- it was our method that we had given
13:42:25 **3** to the EPA. Then it was fighting over the
13:42:30 **4** definitions.
13:42:31 **5** **Q.** Have you or MAS published any standard for
13:42:35 **6** finding asbestos in any material or any mineral or
13:42:39 **7** anywhere that is attributable exclusively to you or
13:42:43 **8** MAS?
13:42:43 **9** **A.** No.
13:42:44 **10** **Q.** Have you published a methodology for
13:42:55 **11** finding asbestos in talc?
13:42:57 **12** **A.** Have not.
13:42:59 **13** **Q.** You're aware that McCrone has done that;
13:43:01 **14** right?
13:43:01 **15** **MR. CIRSCH:** Object to form.
13:43:02 **16** **THE WITNESS:** Jim Millette, yes, I'm
13:43:05 **17** aware, 1990 and 2015, I believe, are the two
13:43:09 **18** papers in Microscopy.
13:43:10 **19** **Q.** (By Mr. Chachkes) You're aware that
13:43:11 **20** McCrone has testing and training classes related to
13:43:14 **21** finding asbestos; correct?
13:43:15 **22** **MR. CIRSCH:** Object to form.
13:43:16 **23** **THE WITNESS:** They teach a -- used to,
13:43:19 **24** anyway, the McCrone Institute. May still do it.
13:43:25 **25** **Q.** (By Mr. Chachkes) Have you ever taught or
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13:43:30 **1** trained -- sponsored teaching or training classes for
13:43:34 **2** finding asbestos for people outside of MAS?
13:43:36 **3** **A.** I've given a couple lectures and taught an
13:43:39 **4** all-day two-day seminar at the American Industrial
13:43:44 **5** Hygiene Association to help train, to give certified
13:43:48 **6** industrial hygienists or industrial hygienists how to
13:43:51 **7** perform TEM analysis for asbestos.
13:43:54 **8** **Q.** Okay. Other than that, any?
13:43:57 **9** **A.** At Georgia Tech in their continuing
13:44:00 **10** education program involving asbestos, seminar up at
13:44:08 **11** Southern University of New York, I have taught there
13:44:13 **12** for a week. Again, it was TEM analysis for asbestos.
13:44:19 **13** **Q.** Okay. Was it for finding talc, asbestos
13:44:24 **14** in talc?
13:44:25 **15** **A.** No, it was just general finding asbestos
13:44:28 **16** in whatever you wanted to look in.
13:44:30 **17** **Q.** Have you or MAS given any training or
13:44:36 **18** classes relating to finding asbestos in talc?
13:44:39 **19** **A.** No.
13:44:39 **20** **Q.** Has any School of Public Health asked you
13:44:43 **21** to assist them in finding asbestos in talc?
13:44:46 **22** **A.** No.
13:44:47 **23** **Q.** You're aware that a number of governmental
13:44:51 **24** bodies are out there, not just in the U.S. but
13:44:54 **25** elsewhere, looking into the question of whether
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13:44:58 **1** asbestos is in cosmetic talc; correct?
13:45:01 **2** MR. CIRSCH: Object to form.
13:45:02 **3** THE WITNESS: I'm aware of Canada and
13:45:06 **4** maybe India, maybe. I've seen some articles.
13:45:07 **5** Q. (By Mr. Chachkes) Okay. Have any of
13:45:07 **6** those -- any governmental body, U.S. or otherwise,
13:45:10 **7** asked you to assist in determining whether cosmetic
13:45:13 **8** talc has asbestos?
13:45:15 **9** MR. CIRSCH: Object to form.
13:45:16 **10** THE WITNESS: No.
13:45:18 **11** Q. (By Mr. Chachkes) Has any federal court
13:45:20 **12** ever said that your methodology for finding talc
13:45:23 **13** in -- asbestos in talc passes Daubert standards?
13:45:30 **14** A. I'm not sure I've had a Daubert standard
13:45:32 **15** in federal court yet. As for state court, I think
13:45:36 **16** there's been seven, six or seven challenges.
13:45:39 **17** Q. So my question is about federal court.
13:45:41 **18** Has any federal court certified you under Daubert
13:45:43 **19** standards for finding asbestos in talc?
13:45:45 **20** MR. CIRSCH: Object to form.
13:45:46 **21** THE WITNESS: As I just stated, I don't
13:45:48 **22** believe I've been in federal court yet other
13:45:50 **23** than this one for -- where any Daubert
13:45:56 **24** challenges would arise.
13:45:57 **25** Q. (By Mr. Chachkes) Has your methodology
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13:45:59 **1** for finding asbestos in talc ever been published in a
13:46:04 **2** peer-review journal or literature otherwise?
13:46:05 **3** MR. CIRSCH: Object to form.
13:46:06 **4** THE WITNESS: Well, it's not my method,
13:46:08 **5** and the Blount method by PLM has been published
13:46:13 **6** and the ISO 22262-2 is an international
13:46:16 **7** standard. So it's not my method; it's standard
13:46:20 **8** protocols for doing the method.
13:46:21 **9** Q. (By Mr. Chachkes) Is all your analysis
13:46:23 **10** for -- all your analysis of cosmetic talc for
13:46:27 **11** asbestos been for and sponsored by plaintiffs'
13:46:30 **12** lawyers?
13:46:31 **13** A. Yes.
13:46:31 **14** Q. You mentioned the NVLA. What is that?
13:46:36 **15** A. National Voluntary Laboratory
13:46:41 **16** Accreditation Program for the determination of
13:46:42 **17** asbestos in air samples by TEM and bulk analysis.
13:46:47 **18** Q. Does the NVLA have an accreditation for
13:46:52 **19** finding asbestos in talc?
13:46:54 **20** A. It's hard to say because they don't really
13:47:01 **21** dictate what the matrix is.
13:47:04 **22** Q. When you say matrix, what do you mean by
13:47:06 **23** that?
13:47:06 **24** A. Well, it's just asbestos in materials.
13:47:09 **25** I'm not sure they have a specific one for talc or a
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13:47:13 **1** specific one for joint compound or a specific one for
13:47:17 **2** thermal insulation. It's just a matter of being able
13:47:23 **3** to determine and detect and to record what is
13:47:27 **4** present.
13:47:28 **5** Q. Okay. Does the NVLA have an accreditation
13:47:33 **6** standard for finding talc in something other than
13:47:36 **7** air, like in -- I'm sorry, strike that.
13:47:37 **8** Does the NVLA have an accreditation
13:47:41 **9** standard for finding asbestos in something other than
13:47:43 **10** air, like in talc?
13:47:44 **11** MR. CIRSCH: Object to form.
13:47:45 **12** THE WITNESS: Well, they accredited to the
13:47:48 **13** EPA 600/R-93 PLM method. That's not specific
13:47:53 **14** for talc. It's building materials.
13:47:56 **15** Q. (By Mr. Chachkes) And do they accredit
13:47:58 **16** you for methodology or something else?
13:48:01 **17** A. To be able to perform the analysis.
13:48:04 **18** Q. Meaning what?
13:48:06 **19** A. Meaning if you -- we have round-robins
13:48:10 **20** that you can adequately identify products that have a
13:48:14 **21** certain concentration of asbestos in it that you
13:48:16 **22** would routinely see for building products.
13:48:18 **23** Q. Has NVLA ever accredited you specifically
13:48:21 **24** for finding talc in asbestos?
13:48:24 **25** A. I think, as I've already stated, they
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13:48:26 **1** don't have a previous matrix, meaning what is the
13:48:29 **2** asbestos in. They go by the EPA 600/R-93 method for
13:48:36 **3** analysis of bulk samples, typically building material
13:48:40 **4** bulk samples for asbestos.
13:48:41 **5** Q. So the NVLA, did they actually have
13:48:44 **6** someone come to your lab and do this accreditation?
13:48:46 **7** A. Yes.
13:48:46 **8** Q. Okay. When that person came to your lab
13:48:47 **9** for the accreditation, did they ask to see your
13:48:51 **10** techniques and methodologies for finding asbestos in
13:48:53 **11** talc?
13:48:54 **12** MR. CIRSCH: Object to form.
13:48:55 **13** THE WITNESS: Again, they don't say talc
13:48:57 **14** and they don't say any particular thing. It's
13:48:58 **15** just your overall methodology for performing the
13:49:01 **16** analysis. And usually the auditor will bring
13:49:07 **17** samples and have the analyst be able to
13:49:10 **18** determine the type and the estimated weight
13:49:14 **19** percent of what's in the sample.
13:49:15 **20** Q. (By Mr. Chachkes) Okay. So the samples
13:49:18 **21** that the NVLA brought for you to analyze for your
13:49:22 **22** accreditation were not talc samples; correct?
13:49:25 **23** A. I don't believe so, no.
13:49:25 **24** Q. They were just straight-up samples of
13:49:28 **25** different kinds of asbestos; right?
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13:49:30 **1** **A.** In some building material.
13:49:32 **2** **Q.** Okay. Is the NVLA accreditation standard
13:49:38 **3** public?
13:49:39 **4** **A.** When you -- I don't understand what you
13:49:40 **5** mean.
13:49:40 **6** **Q.** Obviously, they must have some standard
13:49:42 **7** that they're comparing you to. Is that written down,
13:49:44 **8** or is it just in the minds of the NVLA?
13:49:49 **9** **MR. CIRSCH:** Form.
13:49:50 **10** **THE WITNESS:** I mean, there is a set this
13:49:50 **11** is what you have to do and be able to do, plus
13:49:54 **12** the PAT rounds that's sent out by the Research
13:50:02 **13** Triangle Institute where they send samples out,
13:50:05 **14** your analysts have to analyze them and send them
13:50:08 **15** in, and they compare to see if you pass or fail.
13:50:10 **16** **Q.** (By Mr. Chachkes) Okay. My question was
13:50:14 **17** do they have published standards?
13:50:16 **18** **MR. CIRSCH:** Object to form.
13:50:17 **19** **Q.** (By Mr. Chachkes) Something written down
13:50:17 **20** where I can look at it and read on the page, ah, this
13:50:20 **21** is how they accredit me?
13:50:22 **22** **MR. CIRSCH:** Object to form.
13:50:23 **23** **THE WITNESS:** I think you can go to the
13:50:24 **24** NIST website for this type of -- and download
13:50:29 **25** it. I'm sure it's public.
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13:50:32 **1** **Q.** (By Mr. Chachkes) Now, you've run NIST
13:50:36 **2** standards for EDSA; correct?
13:50:39 **3** **A.** Correct.
13:50:39 **4** **Q.** How often do you run those?
13:50:43 **5** **A.** I think you asked me earlier. I don't
13:50:45 **6** recall. I brought some here because since we were
13:50:48 **7** looking at the EDXA or talking about EDXA of
13:50:53 **8** tremolite, it's in my reliance documents where we
13:50:56 **9** measured the EDXA on 200 tremolite fibers and bundles
13:51:02 **10** showing you the, quote, pattern.
13:51:06 **11** **Q.** I'm sorry, you're talking about the NIST
13:51:08 **12** standard right now?
13:51:08 **13** **A.** Yes.
13:51:09 **14** **Q.** Okay. So you analyzed 200 NIST standards?
13:51:11 **15** **A.** Well, 200 particles in a NIST standard.
13:51:13 **16** **Q.** Okay. So you've at least done one NIST
13:51:16 **17** standard. Have you done more than one NIST standard?
13:51:19 **18** **A.** We have analyzed all the NIST standards to
13:51:26 **19** generate standards of EDXA.
13:51:29 **20** **Q.** Same for SAED?
13:51:31 **21** **A.** Yes.
13:51:32 **22** **Q.** Same for TEM?
13:51:35 **23** **A.** Well, TEM would be EDXA and SAED.
13:51:39 **24** **Q.** Okay. And do you keep those materials,
13:51:45 **25** the standards you run?
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13:51:46 **1** **A.** I believe so.
13:51:47 **2** **Q.** Okay. And you said you brought something.
13:51:49 **3** What did you bring?
13:51:50 **4** **A.** Well, I brought the EDXA on 200 tremolite
13:51:55 **5** fibers and bundles that was done, the 1867.
13:52:01 **6** **Q.** Oh, I'm sorry, so this is something you've
13:52:04 **7** already produced; you just brought it -- also brought
13:52:05 **8** it?
13:52:06 **9** **A.** Yes.
13:52:06 **10** **Q.** Okay.
13:52:06 **11** **A.** I mean, it's in my reliance documents, and
13:52:08 **12** it can give you a -- if you look at the ratios,
13:52:14 **13** they're pretty much identical to what you were
13:52:16 **14** showing me here.
13:52:17 **15** **Q.** Okay. And did you bring any other
13:52:25 **16** documents that haven't been produced?
13:52:27 **17** Did you bring any documents that haven't
13:52:28 **18** been produced?
13:52:29 **19** **A.** Well, these have been produced.
13:52:31 **20** **Q.** Right. So I'm asking separate and apart
13:52:33 **21** from that.
13:52:33 **22** **A.** Oh.
13:52:34 **23** **Q.** Did you bring any documents today that
13:52:35 **24** haven't been produced?
13:52:36 **25** **A.** No.
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13:52:36 **1** **Q.** Okay. So those are your NIST samples for
13:52:45 **2** EDXA; right?
13:52:47 **3** **A.** Right. We were looking at the
13:52:48 **4** Addison-Davies method to see if boiling the acid --
13:52:52 **5** boiling the tremolite in sulfuric acid for an hour
13:52:56 **6** and then boiling it in sodium hydroxide for an hour,
13:53:00 **7** did it change any chemical component or size
13:53:03 **8** distribution of the NIST standard.
13:53:05 **9** **Q.** Did you produce your NIST standard
13:53:07 **10** analysis for TEM?
13:53:11 **11** **A.** That is TEM.
13:53:11 **12** **Q.** Okay. All right. For what about PLM, did
13:53:15 **13** you produce those?
13:53:16 **14** **A.** No.
13:53:16 **15** **MR. CIRSCH:** Object to form.
13:53:18 **16** **THE WITNESS:** You typically -- since it's
13:53:21 **17** almost 100 percent tremolite, it's not usually a
13:53:23 **18** standard that you develop for PLM. You can look
13:53:25 **19** at it and check your refractive indices and make
13:53:30 **20** sure -- the oblique extinction, et cetera, but
13:53:34 **21** you don't usually just run those.
13:53:36 **22** **Q.** (By Mr. Chachkes) Okay. So when you say
13:53:37 **23** you don't usually, you did not run NIST standards for
13:53:40 **24** PLM; is that what I'm hearing?
13:53:42 **25** **A.** I don't know if we have. I don't believe
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13:53:44 **1** SO.
13:53:44 **2** **Q.** Okay. If you did, would you have kept the
13:53:47 **3** material?
13:53:48 **4** MR. CIRSCH: Object to form.
13:53:49 **5** THE WITNESS: I don't know.
13:53:50 **6** **Q.** (By Mr. Chachkes) Okay. We would ask any
13:53:51 **7** of that material be produced.
13:53:54 **8** Any other NIST standards that you ran
13:53:57 **9** under any other instruments that we haven't talked
13:53:59 **10** about?
13:53:59 **11** **A.** No.
13:54:14 **12** MS. TROVATO: I'm sorry, I have Exhibit 10
13:54:15 **13** to this deposition --
13:54:16 **14** MR. CIRSCH: That's been marked at a
13:54:18 **15** previous deposition.
13:54:18 **16** THE WITNESS: That was marked on 3/21.
13:54:18 **17** MS. TROVATO: I want to mark it here.
13:54:21 **18** MR. CHACHKES: Okay. Can we mark this as
13:54:22 **19** Exhibit 14.
13:54:24 **20** (Defendants' Exhibit 14 was marked for
13:54:33 **21** identification.)
13:54:33 **22** **Q.** (By Mr. Chachkes) Okay. So Exhibit 14 is
13:54:34 **23** what you were just referring to as the -- you ran a
13:54:37 **24** NIST standard and the Addison-Davies technique,
13:54:39 **25** that's 14; right?
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13:54:40 **1** **A.** Yes, sir.
13:54:40 **2** **Q.** Okay. Looking back at -- can you go back
13:54:46 **3** to Exhibit 12, which is the EDXA spectrum.
13:54:54 **4** If I handed this to a very experienced
13:55:00 **5** EDXA scientist, as experienced as you want, and I
13:55:06 **6** gave him no context where it came from, you know,
13:55:12 **7** anything other than just this printout, would they
13:55:14 **8** identify this as tremolite and only tremolite?
13:55:17 **9** MR. CIRSCH: Object to form.
13:55:18 **10** THE WITNESS: I can't opine about what
13:55:20 **11** other people would do. If I looked at this, my
13:55:24 **12** reaction would be that looks like tremolite.
13:55:27 **13** **Q.** (By Mr. Chachkes) Okay. I'm not talking
13:55:28 **14** about you. Again, this is about the question of what
13:55:32 **15** a third-party would and how they would interpret
13:55:37 **16** this.
13:55:37 **17** Would somebody who is a very experienced
13:55:39 **18** EDSA scientist look at this spectra and say I know
13:55:47 **19** what this is, this is tremolite? Or are there other
13:55:50 **20** minerals that are consistent with this?
13:55:53 **21** MR. CIRSCH: Object to form.
13:55:54 **22** THE WITNESS: I can't speculate on what
13:55:55 **23** other experienced TEM folks would do. I can
13:55:58 **24** just tell you, since I'm sitting here, that I
13:56:02 **25** would say that's probably tremolite.
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13:56:04 **1** **Q.** (By Mr. Chachkes) Okay. Again, I know
13:56:05 **2** what you think. So these questions aren't about what
13:56:08 **3** you think.
13:56:09 **4** Do you think a third-party scientist
13:56:11 **5** looking at Exhibit 12, without knowing context, just
13:56:15 **6** looking at what's in Exhibit 12, this EDSA spectrum,
13:56:18 **7** might say that also corresponds to minerals that
13:56:23 **8** aren't tremolite?
13:56:25 **9** MR. CIRSCH: Object to form. He's already
13:56:26 **10** answered the question. It calls for
13:56:28 **11** speculation.
13:56:28 **12** THE WITNESS: I can't speculate what other
13:56:30 **13** experienced microscopists would say that is.
13:56:34 **14** **Q.** (By Mr. Chachkes) Okay. And so you can't
13:56:36 **15** testify to a reasonable degree of scientific
13:56:39 **16** certainty that this EDSA pattern in a vacuum can only
13:56:46 **17** correspond to a single mineral and only that mineral
13:56:50 **18** tremolite?
13:56:50 **19** MR. CIRSCH: Object to form.
13:56:52 **20** THE WITNESS: Within a reasonable degree
13:56:56 **21** of scientific certainty, if I looked at this
13:56:57 **22** mineral, I would say that looks like tremolite.
13:56:59 **23** **Q.** (By Mr. Chachkes) So I'm not asking about
13:57:00 **24** you. I'm asking -- this is a question about
13:57:02 **25** reproducibility, that if some other scientist looked
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13:57:06 **1** at this, not you, okay, that are you testifying that
13:57:12 **2** within a reasonable degree of scientific certainty
13:57:15 **3** that this pattern can only correspond to tremolite?
13:57:20 **4** MR. CIRSCH: Object to form.
13:57:21 **5** THE WITNESS: I can't speculate what other
13:57:22 **6** scientists -- and they wouldn't be much of a
13:57:25 **7** scientist if they were going to look at this in
13:57:28 **8** a vacuum and then make some judgment on it
13:57:31 **9** without sitting at the TEM.
13:57:32 **10** If another very experienced scientist was
13:57:34 **11** sitting at a TEM looking at the counting rules
13:57:39 **12** and it's a regulated asbestos, he would most
13:57:42 **13** likely have some information about where it came
13:57:45 **14** from --
13:57:45 **15** **Q.** (By Mr. Chachkes) Okay. So the counting
13:57:46 **16** rules, how do they apply to Exhibit 12, the EDSA?
13:57:49 **17** **A.** Well, again, you cut me off. What I'm
13:57:53 **18** saying is I don't believe it would be a very -- that
13:57:56 **19** it's very scientific to sit in a vacuum and not know
13:58:00 **20** anything about anything and look at this, and how am
13:58:04 **21** I supposed to know what some other experienced
13:58:06 **22** scientist is going to say or do?
13:58:07 **23** **Q.** Okay. I'll represent to you I've shown
13:58:10 **24** this, what's in Exhibit 12, to a very experienced
13:58:15 **25** mineralogist who also does EDXA work, and that
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13:58:19 **1** person's confirmed that this is not a unique pattern
 13:58:22 **2** for tremolite, that there are other minerals that
 13:58:24 **3** correspond.
 13:58:25 **4** Sitting here today, do you have anything
 13:58:26 **5** to provide me that disputes that?
 13:58:28 **6** MR. CIRSCH: Object to form. I mean, how
 13:58:30 **7** can he possibly testify to that?
 13:58:36 **8** MR. CHACHKES: I mean, limit the speaking
 13:58:37 **9** objections, please.
 13:58:38 **10** THE WITNESS: It's EDXA. This came off a
 13:58:41 **11** tremolite fiber bundle that we verified, that in
 13:58:45 **12** the matrix that this came out of, it's well
 13:58:48 **13** established that those type of amphiboles are
 13:58:50 **14** formed.
 13:58:52 **15** What some other expert or experienced
 13:58:57 **16** microscopist is saying that it's going to be
 13:59:00 **17** confused with some other minerals, I can't
 13:59:02 **18** comment on it. If you'd like to tell me what
 13:59:05 **19** those minerals are, I could certainly look and
 13:59:08 **20** see if there's -- (cell phone rings.)
 13:59:10 **21** Is that me? I'm sorry. It's not supposed
 13:59:16 **22** to be on. I apologize.
 13:59:24 **23** Q. (By Mr. Chachkes) What work have you done
 13:59:28 **24** to survey the world of minerals to determine what
 13:59:36 **25** other minerals other than regulated asbestos could
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13:59:40 **1** have EDSA patterns that correspond to what I'm
 13:59:46 **2** looking at in Exhibit 12?
 13:59:47 **3** MR. CIRSCH: Object to form.
 13:59:48 **4** THE WITNESS: I've looked at all the
 13:59:49 **5** potential look-alikes, and again, you just can't
 13:59:53 **6** do an EDS pattern without looking at the
 13:59:56 **7** structure. Some -- and I've looked at every one
 13:59:59 **8** that Sanchez says that could be look-alikes, and
 14:00:06 **9** a number of them are not fibrous and a lot of
 14:00:09 **10** them have aluminum in it. So I'm not concerned
 14:00:13 **11** that this is anything but tremolite asbestos.
 14:00:18 **12** Q. (By Mr. Chachkes) Did you look at any
 14:00:25 **13** databases to compare this spectra to what the
 14:00:28 **14** databases say are the things that have similar EDSA
 14:00:33 **15** patterns?
 14:00:33 **16** MR. CIRSCH: Object to form.
 14:00:34 **17** THE WITNESS: No, I didn't look at any
 14:00:37 **18** databases. This was done in regards to the
 14:00:39 **19** typical TEM protocols for identifying asbestos.
 14:00:42 **20** I'm not aware of any other minerals with all the
 14:00:46 **21** characteristics of both being fibrous, meaning
 14:00:48 **22** the counting definition, the amphibole
 14:00:54 **23** diffraction pattern for the d-spacings. This is
 14:00:57 **24** not misidentified.
 14:00:59 **25** Q. (By Mr. Chachkes) Okay. Did you look
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14:01:00 **1** at -- and I'm just talking about the EDSA now, I'm
 14:01:03 **2** not talking about counting or things that aren't the
 14:01:06 **3** EDSA -- I'm sorry. EDXA. Let me start that again.
 14:01:11 **4** I'm talking about just the EDXA now, not
 14:01:15 **5** talking about other methods of identifying what
 14:01:17 **6** you're looking at. Did you look at any textbook or
 14:01:21 **7** peer-reviewed literature to see what this pattern
 14:01:27 **8** could also -- in Exhibit 12 -- could also correspond
 14:01:30 **9** to?
 14:01:30 **10** MR. CIRSCH: Object to form.
 14:01:31 **11** THE WITNESS: It doesn't correspond -- and
 14:01:32 **12** you're --
 14:01:33 **13** Q. (By Mr. Chachkes) The question is what
 14:01:34 **14** you looked at.
 14:01:34 **15** A. Please don't interrupt.
 14:01:37 **16** MR. CIRSCH: Let him answer the question,
 14:01:38 **17** please.
 14:01:39 **18** THE WITNESS: You're trying to do this in
 14:01:40 **19** a vacuum. Here's just an EDS pattern, I'm not
 14:01:42 **20** going to give you any other information, I'm not
 14:01:43 **21** going to let you look at what kind of -- it's a
 14:01:45 **22** fibrous structure or it's a particulate. Not
 14:01:46 **23** going to let you look at the SAED patterns.
 14:01:50 **24** It's not following the procedure we've
 14:01:52 **25** used here for all these samples. So I can't
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14:01:55 **1** comment on something that I wouldn't do as an
 14:01:58 **2** expert coming in here just looking at an EDS
 14:02:01 **3** pattern with -- EDXA pattern without any other
 14:02:04 **4** information.
 14:02:04 **5** Q. (By Mr. Chachkes) Okay. So am I correct
 14:02:06 **6** that your answer is no, you did not look at a
 14:02:09 **7** textbook or peer-reviewed literature to determine
 14:02:11 **8** what this EDSA pattern could also correspond to other
 14:02:15 **9** than what you believe to be tremolite?
 14:02:16 **10** MR. CIRSCH: Object to form.
 14:02:17 **11** THE WITNESS: No. I wouldn't just take an
 14:02:19 **12** EDS pattern by itself and then run it to see
 14:02:23 **13** what other possible minerals in the world have
 14:02:26 **14** the same elements.
 14:02:27 **15** I would only be testifying here that this
 14:02:29 **16** is tremolite -- regulated tremolite asbestos
 14:02:33 **17** based on the entirety of the analysis that's
 14:02:35 **18** done for each of these fibers or bundles.
 14:02:37 **19** Q. (By Mr. Chachkes) Okay. Let's talk about
 14:02:39 **20** SAED for a moment. You did SAED pattern analysis?
 14:02:43 **21** A. Yes.
 14:02:43 **22** Q. Okay. Would you agree that the more
 14:02:49 **23** complete the SAED pattern an analyst obtains, the
 14:02:52 **24** more likely the analyst is to make an accurate
 14:02:55 **25** determination of the crystal structure?
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14:02:56 **1** MR. CIRSCH: Object to form.
14:02:58 **2** THE WITNESS: No.
14:02:59 **3** **Q.** (By Mr. Chachkes) Why not?
14:02:59 **4** **A.** For tremolite you just need the
14:03:03 **5** d-spacings. For anthophyllite, you just need to --
14:03:07 **6** if it has anything close to the reflection or the
14:03:09 **7** crystal orientation of fibrous talc, you just need to
14:03:12 **8** turn it to make sure that the amphibole pattern comes
14:03:16 **9** up. You don't need to do anything more to adequately
14:03:20 **10** identify if it's anthophyllite versus fibrous talc or
14:03:25 **11** anthophyllite solid solution series.
14:03:28 **12** **Q.** Okay. Is streaking in your SAED pattern
14:03:32 **13** something that can get in the way of an accurate
14:03:35 **14** determination?
14:03:35 **15** **A.** It depends on what type of asbestos it is.
14:03:38 **16** If you're seeing streaking and you have the right
14:03:41 **17** chemistry and it's tubular, then it's chrysotile.
14:03:44 **18** But we don't see the streaking that's getting -- that
14:03:47 **19** you say is getting in the way to adequately look at
14:03:50 **20** these diffraction patterns.
14:03:51 **21** **Q.** If the dots on an SAED pattern are out of
14:03:56 **22** focus, does that affect the accuracy in your
14:03:59 **23** determining the crystal structure?
14:03:59 **24** **A.** Depends what you mean by out of focus. As
14:04:01 **25** long as you have the particular planes of dots, how
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14:04:04 **1** focused or out of focus it is sometimes doesn't
14:04:07 **2** matter. If it's way out of focus, yes, it would.
14:04:09 **3** **Q.** Would you agree that it's important to --
14:04:12 **4** strike that.
14:04:13 **5** Would you agree that the further out you
14:04:21 **6** have complete dots in the pattern and the more
14:04:23 **7** focused the image it is, the easier it is for the
14:04:26 **8** analyst to study the crystal structure?
14:04:28 **9** MR. CIRSCH: Object to form.
14:04:29 **10** THE WITNESS: It depends.
14:04:32 **11** **Q.** (By Mr. Chachkes) What does it depend on?
14:04:34 **12** **A.** Well, I have to get some examples and I
14:04:37 **13** can show you. You know, the patterns we have taken
14:04:41 **14** have been adequate for the analyst, plus the EDXA
14:04:45 **15** plus the fibrous nature to identify appropriately if
14:04:49 **16** it's -- typically what we're seeing is either the
14:04:52 **17** tremolite solid solution series, more tremolite than
14:04:56 **18** winchite or richterite or actinolite, and
14:04:59 **19** anthophyllite solid solution series. We don't take
14:05:02 **20** it any further than that.
14:05:02 **21** **Q.** So you testified that to determine whether
14:05:04 **22** something is tremolite, you just need to know the
14:05:07 **23** d-spacing; correct?
14:05:08 **24** MR. CIRSCH: Object to form.
14:05:09 **25** THE WITNESS: And the EDXA as well as
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14:05:11 **1** the -- if it is fibrous or not. That's all you
14:05:16 **2** need.
14:05:16 **3** **Q.** (By Mr. Chachkes) Okay.
14:05:17 **4** **A.** And that's all NVLAP requires.
14:05:21 **5** **Q.** Okay. And that's expressly written in the
14:05:25 **6** NVLA standard?
14:05:28 **7** **A.** I don't know if it's expressly written,
14:05:30 **8** but it's not required for any of the audits that we
14:05:33 **9** have, zone axis patterns for tremolite or any
14:05:37 **10** regulated asbestos.
14:05:37 **11** **Q.** Okay. So your opinion is that good
14:05:39 **12** science is determined by whether something passes
14:05:42 **13** NVLA accreditation?
14:05:43 **14** MR. CIRSCH: Object to form.
14:05:44 **15** THE WITNESS: It is good science. I don't
14:05:48 **16** know what good science mean. I mean, versus bad
14:05:50 **17** science?
14:05:51 **18** NVLAP is coming in to determine that if
14:05:55 **19** somebody sends you an air sample that you can
14:05:57 **20** adequately identify, or bulk sample, identify
14:06:01 **21** the asbestos to the degree that you're not
14:06:02 **22** letting people walk into an environment where
14:06:04 **23** they're getting exposed to asbestos.
14:06:07 **24** We go to the -- so that we perform the
14:06:11 **25** necessary analytical techniques for each of
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14:06:14 **1** these methods to positively affirm or deny that
14:06:19 **2** there's any detectable asbestos present.
14:06:21 **3** **Q.** (By Mr. Chachkes) Does the NVLA have in
14:06:23 **4** it an example of d-spacing that corresponds to
14:06:27 **5** tremolite?
14:06:29 **6** MR. CIRSCH: Object to the form.
14:06:30 **7** THE WITNESS: I believe so.
14:06:31 **8** **Q.** (By Mr. Chachkes) Okay. And we'd find
14:06:34 **9** that on their website?
14:06:35 **10** MR. CIRSCH: Object to form.
14:06:36 **11** THE WITNESS: I think so.
14:06:37 **12** **Q.** (By Mr. Chachkes) Okay. And then you
14:06:38 **13** said for anthophyllite, what do you need, again?
14:06:40 **14** **A.** For us, anthophyllite, we just make sure
14:06:44 **15** it's not fibrous talc, since we're looking at talc
14:06:50 **16** samples. And that the anthophyllite chemistry, the
14:06:55 **17** anthophyllite solid solution chemistry is
14:06:57 **18** appropriate, what we typically see is, because we're
14:07:00 **19** using heavy density liquid primarily, I think, all
14:07:03 **20** here, all with what I call iron-rich.
14:07:07 **21** **Q.** My question is what SAED pattern
14:07:10 **22** corresponds to anthophyllite?
14:07:12 **23** MR. CIRSCH: Object to form.
14:07:13 **24** THE WITNESS: Which one? There's 277 zone
14:07:16 **25** axes. We look for a typical d-spacing of a
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14:07:19 **1** different orientation for the two selected area
14:07:23 **2** electron diffraction patterns we take.
14:07:26 **3 Q.** (By Mr. Chachkes) Okay. So you determine
14:07:28 **4** whether it's anthophyllite based on d-spacing when
14:07:30 **5** you're talking about SAED only?
14:07:33 **6** MR. CIRSCH: Object to form.
14:07:33 **7** THE WITNESS: D-spacing and a second
14:07:36 **8** pattern from a different crystalline orientation
14:07:42 **9** so that you can rule out fibrous talc.
14:07:45 **10 Q.** (By Mr. Chachkes) Okay. So for
14:07:48 **11** tremolite, do you use two axes or just one?
14:07:52 **12 A.** Just one. It's not required for tremolite
14:07:56 **13** since fibrous talc does not have any calcium in it.
14:08:01 **14** And what you're looking for in an EDS pattern is make
14:08:05 **15** sure there's no aluminum.
14:08:07 **16 Q.** Okay. And for anthophyllite, you use --
14:08:10 **17** you need two axes is what you're saying?
14:08:13 **18 A.** Two axes unless -- I think there's one in
14:08:16 **19** the entire bunch where we only did one.
14:08:19 **20** One axis if it doesn't have that
14:08:22 **21** pseudohexagonal pattern of talc. There's one
14:08:26 **22** reflection in talc -- I can't remember if it's the
14:08:30 **23** 020 -- that some people say are similar. Doesn't
14:08:34 **24** look similar to me. But we just do two anyway for
14:08:38 **25** all these anthophyllite fibers and bundles.
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14:08:40 **1 Q.** Okay. For talc you use two axes to
14:08:43 **2** determine whether the SAED pattern corresponds to
14:08:46 **3** talc?
14:08:47 **4 A.** No, we use two for anthophyllite solid
14:08:51 **5** solution series.
14:08:52 **6 Q.** What about talc, how do you determine
14:08:54 **7** something under SAED is talc?
14:08:56 **8 A.** Chemistry and one SAED pattern that has
14:09:01 **9** the hexagonal dot pattern.
14:09:06 **10 Q.** Okay. So you use -- for the SAED portion
14:09:10 **11** of identifying something as talc, you use only one
14:09:13 **12** pattern; is that correct?
14:09:15 **13 A.** That's correct.
14:09:15 **14 Q.** Okay. If I took that one pattern that you
14:09:21 **15** use to identify talc under SAED, can that pattern
14:09:25 **16** only correspond to talc?
14:09:29 **17** MR. CIRSCH: Object to form.
14:09:30 **18** THE WITNESS: It can only correspond to
14:09:32 **19** talc as long as you have the chemistry to go
14:09:35 **20** along with it. Again, nothing here is done in a
14:09:37 **21** vacuum of just one and nothing else.
14:09:39 **22 Q.** (By Mr. Chachkes) Okay. My question
14:09:41 **23** really isn't a vacuum. And I understand your
14:09:43 **24** qualification you think it's completely unfair, but I
14:09:46 **25** do want to hear what you have to say about this.
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14:09:48 **1** If I have an isolated SAED pattern for
14:09:53 **2** talc in one axis and only that, no other information,
14:10:00 **3** does that uniquely identify talc?
14:10:02 **4** MR. CIRSCH: Object to form.
14:10:03 **5** THE WITNESS: I would not call it. I
14:10:04 **6** don't know what somebody else would do. I would
14:10:07 **7** want to see what we're looking at. Certainly if
14:10:09 **8** it's a talc plate versus chemistry -- but we're
14:10:13 **9** primarily interested in the fibrous talc.
14:10:15 **10** If you're an experienced TEM analyst, you
14:10:20 **11** wouldn't just do it -- to me, my opinion, you
14:10:23 **12** just wouldn't try in a vacuum without any
14:10:25 **13** information to look at a talc SAED and say
14:10:29 **14** that's talc.
14:10:30 **15 Q.** (By Mr. Chachkes) Okay. So recall that
14:10:31 **16** when I asked you my question, I'm saying looking at
14:10:34 **17** SAED in a vacuum and then you went on to talk about a
14:10:37 **18** number of things that aren't SAED, like chemistry,
14:10:41 **19** fibers, plates. So this is a very specific question
14:10:45 **20** and yes or no. Does a one-axis SAED pattern for talc
14:10:54 **21** uniquely identify this as talc?
14:10:58 **22** MR. CIRSCH: Object to form. He's already
14:10:59 **23** answered the question.
14:10:59 **24** THE WITNESS: I would not call it talc
14:11:01 **25** just based on a one hexagonal pattern with no
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14:11:06 **1** other information.
14:11:06 **2 Q.** (By Mr. Chachkes) Okay.
14:11:06 **3 A.** I would want to do -- and have the rest of
14:11:08 **4** the information that we talked about.
14:11:10 **5** I wouldn't do it. Maybe somebody else
14:11:12 **6** would. I can't comment on what other people might or
14:11:14 **7** might not do.
14:11:15 **8 Q.** Okay. So for tremolite, you are saying
14:11:18 **9** you look at one axis as well; correct?
14:11:20 **10 A.** Correct.
14:11:21 **11 Q.** So same question. In a vacuum, all you
14:11:25 **12** have is the SAED pattern for one axis for something
14:11:32 **13** you otherwise would call tremolite. Does that
14:11:34 **14** uniquely and only identify tremolite?
14:11:37 **15** MR. CIRSCH: Object to form.
14:11:38 **16** THE WITNESS: If you were going to do
14:11:42 **17** that, and you were -- for whatever reason that
14:11:46 **18** here is an SAED pattern, there is nothing else,
14:11:52 **19** if it was a zone axis, then you'd have to get
14:11:55 **20** two zone axes, and now you're dealing with like
14:11:58 **21** no chemistry, no idea where the tremolite fiber
14:12:01 **22** came -- if it is tremolite.
14:12:03 **23** So I would not do it. I can't talk about
14:12:05 **24** what other people would do.
14:12:06 **25 Q.** (By Mr. Chachkes) Okay. And indeed, a
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14:12:11 **1** single axis SAED pattern for something that in your
14:12:18 **2** report corresponds to tremolite can also correspond
14:12:23 **3** to many other crystalline structures as well;
14:12:26 **4** correct?
14:12:26 **5** MR. CIRSCH: Object to form.
14:12:27 **6** Q. (By Mr. Chachkes) Just in a vacuum.
14:12:29 **7** Again, with all the qualifications that you don't
14:12:32 **8** want to do it in a vacuum, but my question is in a
14:12:35 **9** vacuum.
14:12:35 **10** MR. CIRSCH: Object to form.
14:12:36 **11** THE WITNESS: It would be a typical
14:12:37 **12** amphibole diffraction pattern. You could say
14:12:39 **13** it's an amphibole, but how far you're willing to
14:12:41 **14** go on that on just that without any other
14:12:44 **15** information, no chemistry, no structure
14:12:48 **16** interface, no morphology, I would not call it
14:12:51 **17** tremolite.
14:12:51 **18** Q. (By Mr. Chachkes) Okay. So for
14:12:54 **19** anthophyllite, where you have two axes and so like
14:13:00 **20** two SAED patterns, in a vacuum, do those two patterns
14:13:06 **21** sitting in front of you, no other information,
14:13:08 **22** uniquely identify what you're looking at as
14:13:11 **23** anthophyllite?
14:13:11 **24** MR. CIRSCH: Object to form.
14:13:12 **25** THE WITNESS: I don't know. Certainly
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14:13:13 **1** would rule out talc with the two patterns.
14:13:16 **2** If I wasn't told that this came out of a
14:13:18 **3** cosmetic talc bulk sample and wasn't allowed to
14:13:21 **4** look at any chemistry, if I wasn't allowed to do
14:13:24 **5** any EDXA and morphology, I probably would not
14:13:31 **6** spend the time contemplating what that was.
14:13:33 **7** Q. (By Mr. Chachkes) Okay. You agree that
14:13:36 **8** the same particle can have different SAED patterns at
14:13:42 **9** different orientations; right?
14:13:43 **10** A. Yes.
14:13:43 **11** Q. And an SAED analyst can take measurements
14:13:49 **12** of the crystals on various axes; correct?
14:13:53 **13** A. Yes. You can get zone axis, and depending
14:13:56 **14** on the orientation of the fiber or bundle, you may
14:13:59 **15** get two -- tough to get three because of your limited
14:14:04 **16** mobility of tilting the fiber; you have to double
14:14:08 **17** tilt it. You could probably get three if one wanted.
14:14:11 **18** Q. Okay. Are you an expert in SAED pattern
14:14:17 **19** analysis?
14:14:18 **20** A. I probably know more than the average
14:14:20 **21** layperson.
14:14:21 **22** Q. Okay. But are you an expert? Are you
14:14:24 **23** somebody, for example, who maybe published any
14:14:27 **24** articles on SAED pattern analysis?
14:14:30 **25** MR. CIRSCH: Object to form.
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14:14:31 **1** THE WITNESS: I have not published any,
14:14:32 **2** no.
14:14:32 **3** Q. (By Mr. Chachkes) Have you taught SAED
14:14:34 **4** pattern analysis?
14:14:35 **5** A. Been a while, but yes.
14:14:37 **6** Q. To whom?
14:14:38 **7** A. Graduate students back in the day when I
14:14:41 **8** was visiting assistant professor.
14:14:42 **9** Q. How many orientations do you need to
14:14:47 **10** uniquely identify a mineral with SAED and only SAED?
14:14:52 **11** A. A minimum of two, maybe three.
14:14:54 **12** Q. Measurements on an SAED are taken in
14:15:01 **13** angstroms; correct?
14:15:02 **14** A. Yes, sir, an angle, angle between -- you
14:15:07 **15** identify, say, the 002, then you have to get to
14:15:10 **16** another orientation, say, the 010 or the minus 020,
14:15:17 **17** and then take the angles and do the measurements or
14:15:20 **18** use CrystalMaker.
14:15:21 **19** Q. Okay. CrystalMaker software that helps
14:15:24 **20** you analyze?
14:15:24 **21** A. Well, as long as it has the appropriate
14:15:26 **22** standards in it, you could.
14:15:28 **23** Q. Do you use CrystalMaker?
14:15:30 **24** A. We have CrystalMaker. But, no, it's not
14:15:32 **25** required for what we do.
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14:15:33 **1** Q. Okay. If you put what you otherwise
14:15:40 **2** identified as an SAED pattern for tremolite into
14:15:44 **3** CrystalMaker without the other end pop, the
14:15:47 **4** identification, this is tremolite?
14:15:49 **5** MR. CIRSCH: Object to form.
14:15:50 **6** THE WITNESS: If you had the appropriate
14:15:51 **7** zone axis and nothing else, it might.
14:15:54 **8** Q. (By Mr. Chachkes) You don't know one way
14:15:55 **9** or the other? Have you ever done that?
14:15:57 **10** A. Have we used CrystalMaker? We have used
14:15:59 **11** it in the past, but we don't use it for this
14:16:02 **12** analysis.
14:16:03 **13** Q. So have you done CrystalMaker on a single
14:16:06 **14** axis? Have you used CrystalMaker for a single axis
14:16:16 **15** SAED pattern?
14:16:16 **16** MR. CIRSCH: Object to form.
14:16:17 **17** THE WITNESS: I don't recall doing that.
14:16:18 **18** Q. (By Mr. Chachkes) Okay. When I talked
14:16:20 **19** about measurements being taken in angstroms, that's
14:16:22 **20** the measurement between the dots; right?
14:16:23 **21** A. Yes.
14:16:24 **22** Q. And that's what we're calling d-space?
14:16:27 **23** A. D-space is between the planes. That's the
14:16:28 **24** measurement we do now.
14:16:30 **25** Q. What's the difference between what I said
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14:16:32 **1** and what you said?

14:16:33 **2** **A.** Well, you can get to the different planes,

14:16:35 **3** but you can also get to -- the d-spacing is the

14:16:38 **4** layers of atoms on top of each other.

14:16:40 **5** **Q.** Okay. Can you describe how your analyst

14:16:50 **6** calibrates the SAED apparatus?

14:16:55 **7** **A.** They do.

14:16:55 **8** **Q.** No, I'm sorry, can you describe how they

14:16:57 **9** do it?

14:16:57 **10** **A.** Well, they get the working distance, and

14:16:59 **11** typically they're using a gold standard for the rings

14:17:02 **12** and the working distance so they can do that

14:17:05 **13** calibration.

14:17:05 **14** **Q.** When you say a gold standard, what do you

14:17:07 **15** mean by that?

14:17:07 **16** **A.** Well, you take something that's fibrous

14:17:11 **17** and you put a gold film on the top so that you get

14:17:14 **18** the outer rings of the gold, which is a standard

14:17:16 **19** measurement, and then the working distance so you can

14:17:18 **20** calibrate.

14:17:19 **21** **Q.** Literally a standard made of gold; is that

14:17:22 **22** what you're saying?

14:17:23 **23** **A.** Yes. Well, it's a very small piece of

14:17:26 **24** gold wire --

25 **Q.** Okay.

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14:17:26 **1** **A.** -- that you sputter, so you're not using a

14:17:28 **2** lot.

14:17:29 **3** **Q.** How often do your analysts calibrate the

14:17:33 **4** SAED apparatus?

14:17:35 **5** **A.** Whatever is required for our NVLAP

14:17:37 **6** accreditation.

14:17:38 **7** **Q.** Do you have any -- sitting here today, do

14:17:40 **8** you know what that is?

14:17:40 **9** **A.** No.

14:17:41 **10** **Q.** Is that in your report?

14:17:43 **11** **A.** No, sir.

14:17:44 **12** **Q.** Okay. So do your analysts tilt the stage

14:17:56 **13** on the TEM to direct the electrons at a certain face

14:18:00 **14** of the crystal?

14:18:01 **15** **MR. CIRSCH:** Object to form.

14:18:02 **16** **THE WITNESS:** The only fibrous material

14:18:06 **17** that we tilt the stage is when we suspect the

14:18:10 **18** anthophyllite solid solution series, where we

14:18:13 **19** rotate it to make sure that the hexagonal

14:18:19 **20** plane -- it's not even the hexagonal plane.

14:18:23 **21** It's a -- I always forget. It's either an 020

14:18:26 **22** or an 002 reflection off the talc, fibrous talc

14:18:31 **23** orientation.

14:18:37 **24** **Q.** (By Mr. Chachkes) Okay. Can you point me

14:18:37 **25** to published peer-reviewed literature where that's an

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14:18:37 **1** appropriate way to identify that mineral?

14:18:39 **2** **MR. CIRSCH:** Object to form.

14:18:40 **3** **THE WITNESS:** I can't. I mean, as I sit

14:18:46 **4** here, I don't recall.

14:18:47 **5** **Q.** (By Mr. Chachkes) Okay. Are the TEMs in

14:18:51 **6** your lab equipped with -- I'm going to butcher the --

14:18:56 **7** is it goniometer?

14:18:57 **8** **A.** Goniometer.

14:18:58 **9** **Q.** Okay. Are the TEMs in your lab equipped

14:19:00 **10** with goniometers to rotate particles?

14:19:03 **11** **A.** Yes. We have a double-tilt holder that we

14:19:05 **12** use if we're going to do zone axis. And we have a

14:19:08 **13** goniometer that can rotate the sample I think up to

14:19:15 **14** 30 degrees, so it's usually at zero tilt.

14:19:21 **15** **Q.** Okay. In your report I don't see any SAED

14:19:25 **16** patterns done for a single subject crystal in three

14:19:29 **17** different axes. That's correct; right?

14:19:31 **18** **A.** That is correct, you will not find that.

14:19:32 **19** **Q.** And you didn't do that?

14:19:33 **20** **A.** No.

14:19:34 **21** **Q.** Okay. Did your analyst document every

14:19:40 **22** instance in the report where they used multiple SAED

14:19:44 **23** patterns?

14:19:45 **24** **A.** I hope so.

14:19:52 **25** **MR. CHACHKES:** Maybe we should -- let's go

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14:19:54 **1** to this one.

14:20:30 **2** (Defendants' Exhibit 15 was marked for

14:20:32 **3** identification.)

14:20:32 **4** **Q.** (By Mr. Chachkes) Okay. Marked as

14:20:34 **5** Exhibit 15, you recognize this as a three-axis SAED

14:20:38 **6** for tremolite; right?

14:20:39 **7** **A.** I know that's what it states.

14:20:40 **8** **Q.** In your opinion, is that different? Is

14:20:43 **9** this not a three-axis?

14:20:46 **10** **A.** Well, it says it's -- you know the 100,

14:20:49 **11** the 010, and the 001, that would be three crystal

14:20:53 **12** orientations by the Miller indices. Now, if that's

14:20:56 **13** what we're looking at here or not, I would have to go

14:20:59 **14** measure it, get the camera constant, et cetera.

14:21:03 **15** So I'm not here to dispute it, but I can't

14:21:06 **16** validate that's what it is.

14:21:08 **17** **Q.** Is there anything -- looking at this right

14:21:09 **18** now, is there any reason you have to dispute that

14:21:11 **19** indeed this is an accurate three-axis SAED for

14:21:16 **20** tremolite?

14:21:17 **21** **MR. CIRSCH:** Object to form.

14:21:18 **22** **THE WITNESS:** I have no reason to dispute

14:21:19 **23** it. I have no reason to accept it.

24 **Q.** (By Mr. Chachkes) Okay.

14:21:20 **25** **A.** If that's what you're saying it is, then

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14:21:22 **1** that's what you're saying.
 14:21:23 **2 Q.** Okay. You see that the pattern is
 14:21:26 **3** different for each of the three axes?
 14:21:27 **4 A.** Well, you have three different crystal
 14:21:29 **5** orientations.
 14:21:30 **6 Q.** Okay.
 14:21:31 **7 A.** Of course it's going to be different.
 14:21:32 **8 Q.** Okay. So you predicted my next question,
 14:21:36 **9** which is in your experience, three different crystal
 14:21:38 **10** orientations for SAED for the same crystal may or
 14:21:42 **11** probably will produce three different patterns;
12 correct?
 14:21:44 **13 A.** That is correct.
 14:21:44 **14 Q.** Okay. For tremolite it certainly will
 14:21:48 **15** produce three different patterns?
 14:21:50 **16 A.** For most of your fibrous crystals where
 14:21:54 **17** you can rotate it, yes.
 14:21:56 **18 Q.** Including anthophyllite and fibrous talc?
 14:22:01 **19 MR. CIRSCH:** Object to form.
 14:22:02 **20 THE WITNESS:** Including -- no. Fibrous
 14:22:02 **21** talc, not. You can rotate it. You're only
 14:22:05 **22** going to get one pattern. That's why if you do
 14:22:09 **23** see the reflection that some people will argue
 14:22:12 **24** looks a little bit like what anthophyllite can
 14:22:15 **25** do, you rotate it, and that never changes.
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 14:22:51 **1 MR. CHACHKES:** Okay. Let's mark as 16.
 14:22:53 **2** (Defendants' Exhibit 16 was marked for
 14:23:07 **3** identification.)
 14:23:07 **4 Q.** (By Mr. Chachkes) Okay. So do you
 14:23:09 **5** recognize what's been marked as Exhibit 16?
 14:23:10 **6 A.** Yes, Verification of 0-Degree Amphibole
 14:23:13 **7** Diffraction Patterns, these are our documents.
 14:23:16 **8 Q.** Okay. This was produced to us, I think,
 14:23:20 **9** Saturday. Do you recall giving this to plaintiffs'
 14:23:23 **10** counsel recently --
 14:23:24 **11 A.** I do.
 14:23:24 **12 Q.** -- to produce?
 14:23:27 **13** Okay. What is it? Can you just -- on a
 14:23:28 **14** high level, what am I looking at?
 14:23:31 **15 A.** High level, we're looking at the
 14:23:32 **16** d-spacings of, most likely, tremolite and
 14:23:40 **17** anthophyllite.
 14:23:40 **18 Q.** And this corresponds to a number of
 14:23:49 **19** samples that appear in your report; correct?
 14:23:51 **20 A.** It does.
 14:23:51 **21 Q.** Okay. And to figure out which page
 14:23:56 **22** relates to which diffraction pattern, I can look on
 14:24:01 **23** that page and it's written in there somewhere; right?
 14:24:06 **24 A.** You'll have to -- I'm sorry.
 14:24:07 **25 Q.** I think I might have messed that up
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14:24:12 **1** linguistically. I'm going to do that again.
 14:24:13 **2 A.** That's fine.
 14:24:13 **3 Q.** If I want to figure out which sample a
 14:24:17 **4** particular verification page refers to, that sample
 14:24:20 **5** is written on the page; correct?
 14:24:21 **6 A.** Yeah, each sample number is on here.
7 Q. Okay.
 14:24:24 **8 A.** You know, M68503-001. So you would look
 14:24:28 **9** for '60, '70s, '80s, wherever it is, and then the
 14:24:36 **10** second number, -001, would be the number 1 or the
 14:24:38 **11** first asbestos structure or bundle that is the
 14:24:42 **12** diffraction pattern is being taken.
 14:24:44 **13 Q.** Sorry. And you went a little quick for
 14:24:47 **14** me, and I apologize --
 14:24:49 **15 A.** That's all right. So you see the number
 14:24:50 **16** there, M68503 --
 14:24:51 **17 Q.** Okay. So I see that as MAS job number.
 14:24:53 **18** That's where you're pointing?
 14:24:54 **19 A.** Right.
 14:24:55 **20 Q.** And can you actually, just so we're on the
 14:24:55 **21** same page, literally, can you go to the first
 14:25:00 **22** verification?
 14:25:00 **23** Okay. So you've got the MAS job number,
 14:25:02 **24** and I'm looking at the number that begins M68
 14:25:05 **25** something, something, something. Okay. How does
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 14:25:06 **1** that tell me what sample that refers to?
 14:25:09 **2 A.** Well, our job number would be M68503. If
 14:25:14 **3** you go to the various '60s, '70s, and '80s, you'll
 14:25:17 **4** see that number.
 14:25:18 **5 Q.** Sorry. Let's pause. '60s, '70s, and
 14:25:21 **6** '80s, you're referring to year --
 14:25:22 **7 A.** The decades.
8 Q. Okay.
 14:25:23 **9 A.** And so then you look for -- if it has
 14:25:26 **10** M68503 on there, you look for the first dash, 001.
 14:25:31 **11 Q.** And what's the first dash refer to?
 14:25:33 **12 A.** Right. That will tell you that that is
 14:25:35 **13** the actual sample number. Then you can go -- it will
 14:25:39 **14** tell you what tab to look under.
 14:25:41 **15** And then the second sample number is 001,
 14:25:44 **16** means that is the first asbestos, in this case,
 14:25:49 **17** anthophyllite solid solution series. It's the very
 14:25:53 **18** first structure up. So you can go then to the data
 14:25:56 **19** there and find that very first diffraction pattern.
 14:25:59 **20 Q.** Okay. But when you say the data there, is
 14:26:02 **21** that data you're referring to in Exhibit 16?
 14:26:04 **22 A.** No, the data that is in the actual data
 14:26:07 **23** notebooks.
 14:26:07 **24 Q.** Got it. And your ability to identify
 14:26:12 **25** '60s, '70s, '80s decades, is that something inherent
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14:26:17 **1** in the job number? Is that like coded in there? How
 14:26:19 **2** did you --
 14:26:19 **3** **A.** That's why I used all of them.
 14:26:20 **4** **Q.** Oh, okay.
 14:26:21 **5** **A.** If you'll give me one, I can -- you know,
 14:26:22 **6** I can probably find it. I didn't bring those along.
 14:26:24 **7** They're getting too big.
 14:26:26 **8** **Q.** Okay. I see on this page, date verified
 14:26:31 **9** 11/19/18; do you see that?
 14:26:33 **10** **A.** Yes.
 14:26:35 **11** **Q.** What does that mean? What was verified?
 14:26:37 **12** **A.** That means that's the date that the data
 14:26:39 **13** was run for this particular program that did this
 14:26:44 **14** analysis.
 14:26:45 **15** **Q.** Is that the date of the SAED as well?
 14:26:48 **16** **A.** No. If you go over to the right-hand
 14:26:51 **17** side, it says date of photo --
 14:26:53 **18** **Q.** Okay.
 14:26:54 **19** **A.** -- 10/29/2018, and the SAED pattern should
 14:26:57 **20** have that date on it.
 14:26:58 **21** **Q.** Got it. And when you say the data was run
 14:27:02 **22** on November 19, 2018, was it put into some computer
 14:27:07 **23** program, or someone did a hand d-spacing? How was
 14:27:11 **24** that --
 14:27:12 **25** **A.** No. The information is put in, it's all
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14:27:14 **1** digital, and it does the calculation. When you put
 14:27:17 **2** in the, you know, the distance, the camera constant,
 14:27:22 **3** and then it will calculate the d-spacing.
 14:27:24 **4** **Q.** I'm sorry, when you say it, there's a
 14:27:26 **5** software that you're using?
 14:27:28 **6** **A.** Yes.
 14:27:28 **7** **Q.** And does the software kind of just read
 14:27:30 **8** the image? You don't have to actually calculate the
 14:27:32 **9** d-spacing by hand?
 14:27:33 **10** **A.** Well, you have to put in the information
 14:27:35 **11** on the camera constant, but then it will read the
 14:27:39 **12** pattern and calculate what the d-spacing is.
 14:27:42 **13** **Q.** Got it. And do you know the name of that
 14:27:44 **14** software?
 14:27:45 **15** **A.** I do not.
 14:27:46 **16** **Q.** Is that on your computer?
 14:27:48 **17** **A.** It's on the TEM computers.
 14:27:52 **18** **Q.** Okay. The numbers that it generates for
 14:27:57 **19** d-spacing, is that fully disclosed here on this page?
 14:28:03 **20** **A.** Yes.
 14:28:04 **21** **Q.** Okay.
 14:28:05 **22** **A.** Over here on the calculated spacing of
 14:28:07 **23** 5.23, and if you go to anthophyllite, the d-spacing
 14:28:11 **24** is in that range of 5.02 to 5.54 on the range, plus
 14:28:17 **25** or minus 5 percent.
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14:28:19 **1** **Q.** And is the reason that zone axis
 14:28:22 **2** information on the lower left is not put in there is
 14:28:24 **3** because you really only ran one?
 14:28:26 **4** **A.** Well, you can get a zone axis -- if you
 14:28:28 **5** happen to hit a zone axis, it will -- you can
 14:28:34 **6** calculate through that. The second anthophyllite
 14:28:36 **7** pattern for this one fiber on the next page has a
 14:28:41 **8** zone axis that said it was near the 101.
 14:28:43 **9** **Q.** Got it. So you're saying is that the
 14:28:48 **10** first verification page that I'm looking at is one
 14:28:51 **11** zone axis, and the second page is another zone axis
 14:28:54 **12** for the same anthophyllite particle?
 14:28:55 **13** **A.** No. Not quite.
 14:28:57 **14** **Q.** Okay.
 14:28:57 **15** **A.** The first one is just d-spacing, the
 14:28:59 **16** second one is just d-spacing. In this particular
 14:29:02 **17** case when they went to the second orientation, they
 14:29:05 **18** got very close to the 101 zone axis.
 14:29:08 **19** **Q.** Okay. So there's two orientations on
 14:29:11 **20** these page 1 and page 2, one is one orientation, the
 14:29:14 **21** second is another orientation?
 14:29:16 **22** **A.** Correct, for the same fiber/bundle.
 14:29:18 **23** **Q.** Got it. We've looked through this, and
 14:29:22 **24** we've totaled 35 samples, which is less than the 72
 14:29:28 **25** samples in your report. Is that consistent with what
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14:29:31 **1** you believe this to be?
 14:29:34 **2** **MR. CIRSCH:** Object to form.
 14:29:35 **3** **THE WITNESS:** Well, a number of samples
 14:29:38 **4** were negative. There would be no zone axis
 14:29:42 **5** pattern.
 14:29:42 **6** A number of the samples would not have
 14:29:45 **7** been run through because we were doing
 14:29:46 **8** verification of Lee Poye's samples, and there's
 14:29:51 **9** a lot of different samples. I believe we have
 14:29:53 **10** produced all the ones that we have taken.
 14:29:55 **11** **Q.** (By Mr. Chachkes) Okay. There were 50
 14:29:57 **12** positives amongst the 72 samples you looked at, and
 14:30:00 **13** yet only 35 samples for which we have the diffraction
 14:30:08 **14** verifications. Am I incorrect there?
 14:30:11 **15** **MR. CIRSCH:** Object to form.
 14:30:13 **16** **THE WITNESS:** Well, a number of positive
 14:30:15 **17** samples there was no TEM because it was
 14:30:19 **18** negative. The Lee Poye verification on his, he
 14:30:25 **19** had six negatives where we found it positive by
 14:30:29 **20** PLM. And then an extra sample. I'll have to
 14:30:35 **21** add it all up now. I believe you have
 14:30:38 **22** everything if we went through and did the math.
 14:30:40 **23** **Q.** (By Mr. Chachkes) Okay. You had
 14:30:41 **24** personally in your lab, MAS, 50 positives; right?
 14:30:46 **25** **MR. CIRSCH:** Object to form.
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14:30:47 **1** Q. (By Mr. Chachkes) Let's strike that. All
14:30:57 **2** right.
14:30:57 **3** So the top of your own supplemental report
14:31:00 **4** reads that -- I'm going to read a sentence from your
14:31:05 **5** report, This new information changed the total number
14:31:07 **6** of containers/samples analyzed from 71 to 72 and the
14:31:11 **7** total positive samples from 49 to 50.
14:31:14 **8** That's accurate; right?
14:31:15 **9** A. Yes.
14:31:15 **10** Q. Okay. If there are 50 positives -- let's
14:31:19 **11** only talk about the positives. If there are 50
14:31:21 **12** positive, why only have verifications for 35?
14:31:24 **13** A. Well, off the top of my head, five of the
14:31:29 **14** positives out of six is from Lee Poye's analysis. We
14:31:34 **15** did not verify his negative samples. Those became
14:31:38 **16** positive because of the Blount PLM and the ISO PLM.
14:31:43 **17** Also, the two samples in Lee Poye where we could not
14:31:47 **18** verify the nine out of 11, they became positive by
14:31:52 **19** PLM. So now we're up to seven.
14:31:55 **20** Q. Of the 15 we're missing; right?
14:31:58 **21** A. Not missing any.
14:31:59 **22** Q. Okay.
14:31:59 **23** A. Now there's a number of samples through
14:32:02 **24** here where the PLM and/or ISO was positive and the
14:32:05 **25** TEM was not. If the TEM is negative, there's no
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14:32:09 **1** SAED. I think that will get you to your number.
14:32:13 **2** Q. Got it.
14:32:15 **3** So if there was a positive under TEM in
14:32:19 **4** the MAS laboratory, I've got the verification here in
14:32:23 **5** Exhibit 16?
14:32:26 **6** A. You are supposed to.
14:32:31 **7** MS. O'DELL: Let me just insert an
14:32:31 **8** objection. There were a number of I think six
14:32:33 **9** files that were produced very similar to
14:32:35 **10** Exhibit 16, so they're not all contained in that
14:32:37 **11** exhibit and --
12 MR. CHACHKES: And I agree --
14:32:44 **13** MS. O'DELL: The record shouldn't reflect
14:32:45 **14** that they are. There are five more documents
14:32:48 **15** that are very similar to Exhibit 16 --
16 MR. CHACHKES: Yeah.
14:32:51 **17** Q. (By Mr. Chachkes) And I apologize.
14:32:51 **18** Everything I said was correct, except you have to
14:32:54 **19** take the six files that you gave me, put them
14:32:57 **20** together, and we only have 35.
14:32:58 **21** A. I understood that.
14:32:59 **22** MR. CHACHKES: Okay. So as long as the
14:33:01 **23** witness understood, I think we're good.
14:33:03 **24** MS. O'DELL: That's not true, but I'm glad
14:33:06 **25** we clarified.
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14:33:08 **1** MR. CHACHKES: Well, I interpret "I
14:33:09 **2** understood" differently than you do.
14:33:11 **3** Q. (By Mr. Chachkes) Was a diffraction --
14:33:12 **4** okay. Skip that.
14:33:14 **5** Now, what are these ranges up here at the
14:33:20 **6** top? I see like a table. What's that? The same
14:33:25 **7** table appears to be reproduced in every single
14:33:27 **8** verification page; am I right?
14:33:28 **9** A. Right. That gives you the amphibole
14:33:30 **10** types, the page number it's on, card number for the
14:33:33 **11** mineral pallet diffraction file, and it gives the
14:33:37 **12** calculated spacings in the range.
14:33:39 **13** So these d-spacings are all tied back to a
14:33:44 **14** standard that every lab should have for these
14:33:50 **15** particular type of regulated asbestos structures.
14:33:53 **16** Q. Okay. The page number refers to a page of
14:33:57 **17** what, in the table?
14:33:59 **18** A. Page of the Mineral Powder Diffraction
14:34:02 **19** File Data for that particular mineral.
14:34:03 **20** So grunerite will be found on page 449.
14:34:07 **21** It will be card number 31-631. And on that card
14:34:11 **22** number it will give you the calculated d-spacings for
14:34:15 **23** that particular mineral.
14:34:16 **24** Q. Okay. So it's a page within the Mineral
14:34:21 **25** Powder Diffraction File, and then in that page is
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14:34:23 **1** something called a card. I imagine that's like a
14:34:25 **2** little box?
14:34:26 **3** A. Correct. And it will give you all the
14:34:30 **4** d-spacing information that's published here.
14:34:32 **5** Q. Okay. And the range, I see in the last
14:34:37 **6** column on the right, that's the margin of error?
14:34:41 **7** A. Correct.
14:34:42 **8** Q. Now, if I'm reading this correctly, U4, on
14:34:47 **9** this first page of the verification, you calculated a
14:34:50 **10** spacing of 5.23; correct?
14:34:53 **11** A. Correct.
14:34:54 **12** Q. And that falls within every single
14:34:57 **13** amphibole types range in that chart?
14:35:01 **14** A. That's correct.
14:35:01 **15** Q. How is it you identified this as
14:35:08 **16** anthophyllite when it falls within five different
14:35:13 **17** d-spacing ranges?
14:35:15 **18** A. Do I get to use the other data that's
14:35:17 **19** generated, or is this one of those in a vacuum type
14:35:19 **20** questions?
14:35:20 **21** Q. Let's say in a vacuum. In a vacuum.
14:35:22 **22** MR. CIRSCH: Object to form.
14:35:23 **23** THE WITNESS: I wouldn't -- if I just had
14:35:25 **24** the d-spacing without any information, I
14:35:28 **25** wouldn't make that call. I wouldn't say that it
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14:35:30 **1** was anthophyllite. I would say it is consistent
14:35:32 **2** with the typical amphibole d-spacing.
14:35:34 **3 Q.** (By Mr. Chachkes) Okay. What other
14:35:36 **4** amphibole in the Mineral Powder Diffraction File have
14:35:44 **5** d-spacing ranges that span 5.23?
14:35:48 **6 A.** Most of your amphibole minerals, both
14:35:52 **7** monoclinic and orthorhombic, will have d-spacings in
14:35:56 **8** this range.
14:35:57 **9 Q.** What about nonamphiboles, are there
14:36:01 **10** nonamphibole crystals that have d-spacings that the
14:36:03 **11** range covers 5.23?
14:36:05 **12 A.** I don't believe so.
14:36:06 **13 Q.** The --
14:36:31 **14 A.** Are we done with this one?
14:36:32 **15 Q.** For now, yes.
14:36:34 **16** Let's go to another exhibit. That's going
14:36:37 **17** to be -- let her mark it up.
18 A. Oh. Sorry.
14:36:41 **19** MR. CHACHKES: That's going to be 17.
14:36:43 **20** (Defendants' Exhibit 17 was marked for
14:36:59 **21** identification.)
14:36:59 **22 Q.** (By Mr. Chachkes) Is this the same sort
14:37:02 **23** of document as 16? Is this one of the --
14:37:04 **24 A.** Yes.
14:37:04 **25 Q.** Okay. At the top, I see that for your
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14:37:23 **1** SAED analysis you have an equation to determine
14:37:27 **2** spacing; do you see that?
14:37:28 **3 A.** We have the camera constant divided by the
14:37:34 **4** measured distance, yes.
14:37:35 **5 Q.** Okay. And in your -- your methodology
14:37:43 **6** determined the spacing by dividing the camera
14:37:45 **7** constant by the measured distance; is that correct?
14:37:48 **8 A.** Correct.
14:37:49 **9 Q.** And why does MAS use this formula?
14:37:52 **10 A.** That's the standard formula. You can --
14:37:57 **11** the pixels is part of the computer program where you
14:38:01 **12** could -- in the old days you'd actually measure it.
14:38:03 **13 Q.** Can you provide a reference in the
14:38:05 **14** scientific literature that reflects this equation?
14:38:08 **15 A.** CrystalMaker has it.
14:38:12 **16 Q.** CrystalMaker software; right?
14:38:15 **17 A.** Software. Yes, somewhere I can find it
14:38:17 **18** from the old days the formula for this.
14:38:20 **19 Q.** Okay. You didn't cite anything in your
14:38:22 **20** paper, correct, in your reports; correct?
14:38:25 **21 A.** No, because it's a standard method that
14:38:27 **22** all TEM labs do that do this, so.
14:38:30 **23 Q.** The manual -- I'm sorry, the measured
14:38:34 **24** distance than the denominator, that's manually
14:38:38 **25** measured, or is that measured automatically by
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14:38:39 **1** software?
14:38:39 **2 A.** It's measured off the image that's been
14:38:43 **3** calibrated.
14:38:43 **4 Q.** Okay. It's measured off the image --
14:38:45 **5 A.** Of the diffraction -- diffraction pattern
14:38:48 **6** when you run the program, yes.
14:38:48 **7 Q.** Okay. So it's measured by the program,
14:38:50 **8** not somebody -- a human being with a ruler?
14:38:51 **9 A.** Not anymore.
14:38:53 **10 Q.** Okay. Used to be manual?
14:38:54 **11 A.** Old days, yes.
12 Q. Okay.
14:38:56 **13 A.** When you actually took a negative and
14:38:58 **14** every TEM lab had a dark room. And thank goodness
14:39:03 **15** those days are over.
14:39:04 **16 Q.** Can you provide me a reference in the
14:39:07 **17** scientific literature that permits the identification
14:39:16 **18** of an asbestos type strictly by an EDS -- sorry --
14:39:25 **19** SAED pattern? Strike that. Let me ask that better.
14:39:28 **20** Can you provide me a reference in the
14:39:29 **21** published literature -- in the scientific literature
14:39:31 **22** that sanctions identifying an asbestos simply by a
14:39:39 **23** single axis SAED pattern?
14:39:42 **24 A.** I think we already talked about that. I'm
14:39:44 **25** not sure any scientific literature would say if
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14:39:47 **1** you're only handed the information from one zone axis
14:39:51 **2** diffraction pattern without the rest of the
14:39:55 **3** information -- if you have a good zone axis and it
14:40:01 **4** matches, you may be able to do the calculation.
14:40:06 **5** So one zone axis -- you might be able to
14:40:11 **6** do that if you're looking at between two different
14:40:14 **7** minerals, say, a monoclinic versus an orthorhombic.
14:40:19 **8** If you have no information whatsoever, I
14:40:25 **9** don't know. I don't know if you could do it with
14:40:27 **10** just one. I'd have to see.
14:40:28 **11 Q.** Okay. The Mineral Powder Diffraction File
14:40:32 **12** Data, is that a book I can go out in the library and
14:40:36 **13** get?
14:40:37 **14** MR. CIRSCH: Object to form.
14:40:38 **15** THE WITNESS: I imagine, if it's only an
14:40:39 **16** engineering library or a library at a
14:40:42 **17** university. You can order it online.
14:40:44 **18 Q.** (By Mr. Chachkes) Okay. It's generated
14:40:46 **19** by somebody outside of MAS?
14:40:48 **20 A.** No, this is not an MAS book. This is the
14:40:54 **21** Mineral Powder Diffraction File Data Book. There's
14:40:55 **22** an international standard for these types of cards
14:40:59 **23** for the crystalline structure information.
14:41:01 **24 Q.** Okay. What's the d-spacing for talc?
14:41:15 **25 A.** I don't know.
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14:41:17 **1** **Q.** Is the d-spacing for talc within the
14:41:22 **2** ranges we see here for -- in your chart for regulated
14:41:26 **3** asbestos?
14:41:26 **4** **A.** It's been a while since I've calculated
14:41:30 **5** it, so I'd have to look that up.
14:41:33 **6** **Q.** Why do you only have amphiboles in your
14:41:41 **7** reference chart?
14:41:46 **8** MR. CIRSCH: Object to form.
14:41:47 **9** THE WITNESS: Because this is the 0-degree
14:41:50 **10** amphibole diffraction pattern table.
14:41:53 **11** **Q.** (By Mr. Chachkes) So are you assuming
14:41:56 **12** going into looking at the SAED pattern that you're
14:41:59 **13** looking at an amphibole, or you're saying the
14:42:02 **14** amphibole patterns that you're looking at could
14:42:04 **15** only -- the patterns you're looking at could only be
14:42:06 **16** amphiboles?
14:42:07 **17** **A.** There's no serpentine materials in here.
14:42:12 **18** We've never measured chrysotile -- ever detected
14:42:15 **19** chrysotile asbestos in any of the TEM analysis
14:42:17 **20** because of the heavy liquid density separation.
14:42:21 **21** And we don't go in blind or in a vacuum
14:42:24 **22** when we do this. The chrysotile diffraction patterns
14:42:29 **23** are very unique; the morphology is very unique. So
14:42:33 **24** when we have amphiboles, we have a different chart.
14:42:36 **25** **Q.** And again -- strike that.
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14:42:44 **1** I think I already asked this question, I
14:42:48 **2** apologize if I'm asking it twice, but there are
14:42:51 **3** nonamphiboles that have d-spacing within the ranges
14:42:53 **4** we see in this chart, that is, crystals that are
14:43:00 **5** nonamphiboles?
14:43:00 **6** **A.** Most amphiboles will have d-spacings in
14:43:03 **7** this range.
14:43:04 **8** **Q.** My question is are there crystals that
14:43:08 **9** aren't amphiboles and aren't serpentine that have
14:43:11 **10** d-spacings in this range?
14:43:13 **11** MR. CIRSCH: Object to form.
14:43:14 **12** THE WITNESS: Nonamphiboles, not that I'm
14:43:16 **13** aware of.
14:43:16 **14** **Q.** (By Mr. Chachkes) For example, are there
14:43:17 **15** any phyllosilicates that have d-spacing in these
14:43:21 **16** ranges?
14:43:21 **17** **A.** I don't believe so.
14:43:22 **18** **Q.** Okay. You're stating to within a degree
14:43:25 **19** of scientific certainty there aren't any --
14:43:28 **20** MR. CIRSCH: Object --
14:43:28 **21** THE WITNESS: When I say I don't believe
14:43:29 **22** so, I don't think I hold that within a
14:43:32 **23** reasonable degree of scientific certainty.
14:43:33 **24** Again, I'm not looking at this in a
14:43:36 **25** vacuum. If you have the amphibole d-spacing,
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14:43:39 **1** you have the appropriate chemistry. In these
14:43:41 **2** cases they did zone axis for these particular
14:43:44 **3** samples, for these two samples, so zone axis for
14:43:52 **4** 1 and 2.
14:43:55 **5** So, you know, I don't know how many
14:43:58 **6** nonamphiboles are out there, but there's nothing
14:44:02 **7** that I'm aware of if you're looking at all the
14:44:04 **8** appropriate information and not looking at this
14:44:07 **9** in a vacuum. None of this has ever -- you've
14:44:10 **10** got to understand, none of this is ever done in
14:44:12 **11** a vacuum. It's coupled with the chemistry,
14:44:14 **12** coupled with the morphology, and also we have a
14:44:16 **13** pretty good idea of what kind of matrix it's in.
14:44:20 **14** **Q.** (By Mr. Chachkes) Okay.
14:44:21 **15** **A.** It's cosmetic talc.
14:44:22 **16** **Q.** So, I'm sorry, the methods you use to
14:44:26 **17** identify asbestos are -- there's TEM, there's XRD,
14:44:34 **18** and there's PLM. Are those the three, the big three?
14:44:38 **19** **A.** Those are the -- really the only ones
14:44:41 **20** is -- yeah, XRD is used, but the big two are TEM and
14:44:47 **21** PLM.
14:44:47 **22** **Q.** Okay. So is there anything in the
14:44:52 **23** published scientific literature, peer-reviewed, that
14:44:55 **24** says you can take an analysis under each of TEM, XRD,
14:45:00 **25** and PLM, none of which conclusively point to a
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14:45:04 **1** regulated asbestos, but together you can determine
14:45:07 **2** that it's a regulated asbestos?
14:45:09 **3** MR. CIRSCH: Object to form.
14:45:10 **4** THE WITNESS: Well, you're wrong about
14:45:18 **5** this. XRD cannot point to anything. Can't tell
14:45:21 **6** you if it's fibrous or not.
14:45:24 **7** Polarized light microscopy by itself can
14:45:26 **8** tell you if you have regulated asbestos.
14:45:29 **9** Transmission electron microscopy itself can tell
14:45:31 **10** you if it's regulated asbestos.
14:45:34 **11** Both techniques have their strengths and
14:45:38 **12** their weaknesses. This type of analysis, in my
14:45:41 **13** opinion, needs the suite of techniques: the PLM,
14:45:48 **14** the Blount PLM, and TEM.
14:45:51 **15** For Vermont and Italian talc, I don't
14:45:54 **16** think XRD serves any useful purpose.
14:45:56 **17** **Q.** (By Mr. Chachkes) Okay. Let's just ask
14:45:58 **18** the question again.
14:46:00 **19** Now, the assumption of the hypothetical is
14:46:02 **20** that your TEM result independently does not
14:46:07 **21** conclusively point to a regulated asbestos, that your
14:46:11 **22** XRD independently, that is, independent of the other
14:46:14 **23** analyses, does not conclusively point to a regulated
14:46:17 **24** asbestos, and that your PLM, similarly, independently
14:46:20 **25** does not point to a regulated asbestos.
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14:46:22 **1** Can those three together conclusively
14:46:28 **2** point to a regulated asbestos --
14:46:31 **3** MR. CIRSCH: Object to form.
14:46:32 **4** **Q.** (By Mr. Chachkes) -- each one making up
14:46:33 **5** for the other's defects, in a way?
14:46:36 **6** MR. CIRSCH: Object to form.
14:46:36 **7** THE WITNESS: Well, there's no defects
14:46:38 **8** like you state. I can't answer a question where
14:46:40 **9** you're saying if all three are negative or
14:46:42 **10** nondetects, because it's either nondetect or you
14:46:45 **11** have identified the regulated asbestos.
14:46:47 **12** So if you're telling me I have three
14:46:49 **13** nondetects, then, no, I can't point to any
14:46:52 **14** regulated asbestos in three nondetects.
14:46:54 **15** **Q.** (By Mr. Chachkes) Okay.
14:46:55 **16** **A.** Before you start, we've been going over an
14:46:57 **17** hour. Can we go off the record?
14:46:59 **18** **Q.** Can I maybe ask a couple more questions on
14:47:01 **19** the same line, and I'll finish it up, if that's okay?
14:47:03 **20** **A.** If you insist.
14:47:04 **21** **Q.** I don't do this that often but --
14:47:06 **22** **A.** That's fine.
14:47:07 **23** **Q.** It's fascinating science.
14:47:09 **24** Okay. So we agreed that the single zone
14:47:16 **25** axis SAED pattern in a vacuum didn't point to
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14:47:18 **1** asbestos, right, even though you're saying it's
14:47:20 **2** asbestos; right?
14:47:22 **3** MR. CIRSCH: Object to form.
14:47:23 **4** THE WITNESS: I don't think we agreed to
14:47:24 **5** that. It depends on the zone that you get. If
14:47:28 **6** you were to sit down and just look at that by
14:47:32 **7** itself, a 302, you could probably eliminate a
14:47:36 **8** lot.
14:47:37 **9** But based with all the other information,
14:47:39 **10** if the zone axis -- if you're getting a zone
14:47:42 **11** axis, that means you have something that you got
14:47:44 **12** a zone axis off of.
14:47:45 **13** **Q.** (By Mr. Chachkes) Right.
14:47:47 **14** **A.** But you're asking this hypothetical in a
14:47:47 **15** vacuum. That's not what we do. I can't -- I've not
14:47:52 **16** sat down and tried since graduate school where they
14:47:54 **17** give you a mineral and just give you XRD pattern and
14:47:57 **18** say go identify it. It's not something that we would
14:48:01 **19** ever do for any of these analyses without the
14:48:03 **20** morphology and without the chemistry.
14:48:07 **21** **Q.** Okay. Last question. I'll ask it one
14:48:11 **22** more time because I don't think I've gotten the
14:48:13 **23** answer. If you want to give the same answer, it's
14:48:16 **24** fine, but I'm giving you the opportunity to answer
14:48:18 **25** this.
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14:48:19 **1** If I had a single crystal, I had a TEM
14:48:21 **2** analysis that in a vacuum could point to many things,
14:48:25 **3** not just asbestos, an XRD that could point to many
14:48:29 **4** things, not just asbestos, and in a vacuum PLM that
14:48:32 **5** could point to many things, not just asbestos, is
14:48:35 **6** there any published peer-reviewed literature that I
14:48:38 **7** can look at that says that's a situation where you
14:48:41 **8** can combine the three and say that indeed is
14:48:43 **9** asbestos?
14:48:44 **10** MR. CIRSCH: Object to form.
14:48:45 **11** THE WITNESS: I can't answer a
14:48:46 **12** hypothetical that would never happen in a
14:48:49 **13** working real lab that does this analysis. You
14:48:51 **14** wouldn't sit there and go, I've run these three
14:48:53 **15** and I have no clue what it is, now I'm going to
14:48:57 **16** combine it all together and say, gee, that's
14:48:58 **17** going to tell me.
14:48:59 **18** I can't answer that hypothetical.
14:49:03 **19** Somebody else will have to wade through that
14:49:05 **20** one.
14:49:06 **21** MR. CHACHKES: Okay. Let's take a break.
14:49:08 **22** THE WITNESS: Thank you.
14:49:08 **23** (Recess from 2:49 p.m. to 3:07 p.m.)
15:07:57 **24** **Q.** (By Mr. Chachkes) So Dr. Longo, in your
15:09:18 **25** diffraction verification documents, sometimes the
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15:09:25 **1** bottom -- that's not a good example.
15:09:30 **2** Let's look at Exhibit 16, and let's look
15:09:38 **3** at the first verification page. Sometimes in the
15:09:41 **4** lower left, as we discussed, the zone axis
15:09:44 **5** information is just not -- there's nothing filled in
15:09:47 **6** there; right?
15:09:47 **7** **A.** Correct.
15:09:47 **8** **Q.** If it's blank, does that mean that this
15:09:54 **9** particular image was not taken at a zone axis?
15:09:57 **10** **A.** That is correct.
15:09:58 **11** **Q.** Does MAS maintain nonasbestiform reference
15:10:06 **12** samples for tremolite?
15:10:08 **13** **A.** Well, yes and no. Most -- tremolite
15:10:15 **14** standard has both. If you go to the one I brought --
15:10:26 **15** and when we say nonasbestiform, we're saying it's not
15:10:31 **16** meeting the 5-to-1 aspect ratio. That's less. It
15:10:36 **17** certainly still could be asbestiform since it's
15:10:39 **18** fibrous, but those we do not count in our analysis
15:10:46 **19** using the TEM protocols, which are the standard
15:10:50 **20** methods for scientists to identify asbestos. And you
15:10:54 **21** can understand, these protocols are all heavily
15:10:55 **22** vetted and peer-reviewed.
15:11:03 **23** For example, my ASTM D5755 method took six
15:11:07 **24** years to get it through the 125 scientists. And all
15:11:07 **25** these methods have been published in the
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15:11:10 **1** peer-reviewed literature since any time anybody
15:11:14 **2** publishes anything on the measurement of asbestos,
15:11:16 **3** they will reference one of these protocols.
15:11:19 **4** **Q.** Do you remember what my original question
15:11:22 **5** was? So the question was do you have -- so let's
15:11:24 **6** make it easier.
15:11:25 **7** Do you have a bottle of nonasbestiform
15:11:27 **8** tremolite at MAS?
15:11:29 **9** **MR. CIRSCH:** Object to form.
15:11:30 **10** **THE WITNESS:** I'm not sure a bottle of
15:11:32 **11** nonasbestiform tremolite actually exists. You
15:11:34 **12** typically find both. Somebody may call it
15:11:37 **13** nonasbestiform; but when you go look through it,
15:11:40 **14** or they say it's asbestos, you'll find
15:11:42 **15** structures that are less than the 5-to-1 aspect
15:11:47 **16** ratio. We don't count those.
15:11:49 **17** **Q.** (By Mr. Chachkes) Do you have a bottle at
15:11:52 **18** MAS of nonasbestos -- of tremolite where, on average,
15:11:56 **19** its aspect ratio is below 5-to-1?
15:11:59 **20** **MR. CIRSCH:** Object to form.
15:12:00 **21** **THE WITNESS:** I'm not sure any such thing
15:12:02 **22** exists. We don't have what doesn't exist.
15:12:05 **23** **Q.** (By Mr. Chachkes) Okay. Do you have a
15:12:06 **24** bottle in your office of anthophyllite where the
15:12:11 **25** aspect ratio of the anthophyllite is all underneath
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15:12:14 **1** 5-to-1?
15:12:15 **2** **MR. CIRSCH:** Object to form.
15:12:16 **3** **THE WITNESS:** No. You have them that have
15:12:19 **4** a range of aspect ratios, less than 5-to-1,
15:12:23 **5** greater than 5-to-1. The average is typically
15:12:25 **6** above 5-to-1.
15:12:26 **7** **Q.** (By Mr. Chachkes) Okay. So you don't
15:12:27 **8** have a bottle in your office of an amphibole that has
15:12:37 **9** aspect ratios averaging under 5-to-1?
15:12:41 **10** **MR. CIRSCH:** Object to form.
15:12:42 **11** **THE WITNESS:** No. All the bottles with
15:12:44 **12** standards we have are actual asbestos, but they
15:12:46 **13** do have a portion that are below 5-to-1.
15:12:48 **14** **Q.** (By Mr. Chachkes) And that's because it's
15:12:50 **15** a big bell curve and some of that bell curve is over
15:12:53 **16** on the less than 5-to-1 and some of it is on the
15:12:55 **17** right?
15:12:55 **18** **A.** That's correct. The NIST standard for
15:12:58 **19** tremolite, I think the average -- even with the less
15:13:00 **20** than 5-to-1, greater than 5-to-1, is around 10.
15:13:04 **21** **Q.** Is your opinion that there's literature
15:13:13 **22** supporting your position that you always find both
15:13:16 **23** asbestiform and nonasbestiform amphiboles together?
15:13:19 **24** **A.** I believe so.
15:13:20 **25** **Q.** Can you tell me --
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15:13:22 **1** **A.** I can't tell you right now. I mean,
15:13:24 **2** sometimes I anticipate cross-exam -- you know,
15:13:28 **3** discovery depositions, but I'm not aware of any that
15:13:32 **4** somebody states this is all, quote, nonasbestiform or
15:13:35 **5** all cleavage fragments.
15:13:38 **6** **Q.** Okay.
15:13:38 **7** **A.** What I see -- and I'll have to dig it
15:13:40 **8** up -- is that if you have one, you have the other.
15:13:42 **9** **Q.** And you don't cite any such literature in
15:13:45 **10** your expert report, do you?
15:13:47 **11** **A.** No, sir, I'm not making the claim that --
15:13:52 **12** what I'm doing in my expert report is saying here's
15:13:55 **13** what we measured using the standard TEM, well-vetted
15:14:00 **14** protocols for the identification of regulated
15:14:02 **15** asbestos.
15:14:02 **16** **Q.** Do you remember the question was about
15:14:03 **17** whether --
15:14:04 **18** **MR. CIRSCH:** I don't know if he finished
15:14:05 **19** the answer yet.
15:14:06 **20** **Q.** (By Mr. Chachkes) Yeah. Do you remember
15:14:08 **21** the question?
15:14:08 **22** **MR. CIRSCH:** I --
15:14:08 **23** **THE WITNESS:** I remember --
15:14:12 **24** **THE REPORTER:** One at a time.
15:14:12 **25** **THE WITNESS:** I remember the question, but
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15:14:14 **1** the answer is it's not something that I was
15:14:16 **2** relying on for my identification of regulated
15:14:18 **3** asbestos. I'm relying on the peer-reviewed
15:14:22 **4** publications for the standard TEM methods and
15:14:26 **5** standard PLM methods.
15:14:27 **6** **Q.** (By Mr. Chachkes) Do you have a standard
15:14:28 **7** in your lab of an SAED readout for an amphibole with
15:14:35 **8** ratios of less than 5-to-1 aspect ratios?
15:14:39 **9** **MR. CIRSCH:** Object to form.
15:14:46 **10** **Q.** (By Mr. Chachkes) So I'm not asking
15:14:47 **11** whether you have incidentally such a thing but a
15:14:49 **12** standard that you use to compare against?
15:14:52 **13** **A.** Well, no, there's nothing to compare. The
15:14:56 **14** less than 5-to-1 aspect ratio versus greater than
15:14:59 **15** 5-to-1 aspect ratio will have the identical
15:15:02 **16** d-spacings and identical diffraction patterns.
15:15:05 **17** There's no difference in a, quote, less than 5-to-1
15:15:08 **18** and greater than 5-to-1. You just will have the
15:15:12 **19** exact same type of patterns for d-spacing, and if you
15:15:14 **20** were to do a zone axis, you'll have the same zone
15:15:18 **21** axis.
15:15:18 **22** **Q.** Okay. So it's your opinion that for SAED,
15:15:20 **23** a single nonasbestiform tremolite crystal and a
15:15:24 **24** single asbestiform tremolite crystal will have the
15:15:28 **25** same SAED patterns?
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15:15:31 **1** MR. CIRSCH: Object to form.
15:15:32 **2** THE WITNESS: Yes.
15:15:32 **3** **Q.** (By Mr. Chachkes) Okay. Is the same true
15:15:33 **4** for EDXA?
15:15:34 **5** **A.** It is.
15:15:34 **6** **Q.** Is the same true that the PLM will look
15:15:38 **7** the same for an asbestiform fragment and a
15:15:41 **8** nonasbestiform fragment of tremolite?
15:15:44 **9** **A.** Well, let's be clear. I'm not calling it
15:15:47 **10** asbestiform and nonasbestiform. I'm calling it --
15:15:49 **11** for the 22262-1, it's materials that are less than
15:15:54 **12** 3-to-1 aspect ratio. They'll have the same
15:16:00 **13** refractive indices, same information.
15:16:03 **14** There's no difference in the crystalline
15:16:04 **15** structure between what's less than 5-to-1 or less
15:16:08 **16** than whatever the aspect ratio is for a particular
15:16:11 **17** method that you're using. There's no difference.
15:16:14 **18** That's how you either count greater than
15:16:17 **19** or equal to 5-to-1 aspect ratio for TEM. Or in the
15:16:22 **20** PLM we're looking at bundles that typically are -- I
15:16:26 **21** think all of them were -- the individual fibers and
15:16:28 **22** the bundles were greater than 20-to-1.
15:16:31 **23** Where we draw the line is in the method
15:16:34 **24** when it says anything less than 3-to-1 is not
15:16:36 **25** counted. And that's what we do. We call them
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15:16:38 **1** cleavage fragments.
15:16:39 **2** **Q.** Have you ever heard anyone distinguishing
15:16:41 **3** asbestiform and nonasbestiform tremolite by virtue of
15:16:44 **4** whether it has parallel fibers?
15:16:48 **5** MR. CIRSCH: Object to form.
15:16:49 **6** THE WITNESS: Yes. If it is a bundle, by
15:16:52 **7** definition, it is asbestiform. Both Ann Wylie
15:16:56 **8** and both the 22262-1 and the R-93 as well as --
15:17:02 **9** and TEM's different. You take the overall
15:17:05 **10** aspect ratio of a bundle width to length.
15:17:09 **11** That's how we distinguish between a regulated
15:17:13 **12** asbestos fiber and not. But even in TEM, if it
15:17:15 **13** is a bundle, hence it is asbestiform.
15:17:17 **14** **Q.** (By Mr. Chachkes) Okay. Would the SAED
15:17:19 **15** pattern for tremolite with parallel fibers and
15:17:22 **16** tremolite that does not exhibit parallel fibers be
15:17:26 **17** the same?
15:17:27 **18** **A.** Yes.
15:17:28 **19** **Q.** Okay. Same --
15:17:29 **20** **A.** For the right orientation, same
15:17:31 **21** orientation, yeah. Yes.
15:17:32 **22** **Q.** What about on all three orientations?
15:17:35 **23** **A.** I haven't done it on all three
15:17:37 **24** orientations because we don't count those if it has
15:17:40 **25** less than the counting aspects, and we typically only
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15:17:43 **1** do d-spacings following the peer-reviewed published
15:17:46 **2** protocols.
15:17:47 **3** **Q.** Okay. Do you have any opinion on whether
15:17:50 **4** a tremolite with parallel fibers and a tremolite that
15:17:53 **5** does not have parallel fibers would indeed have
15:17:56 **6** identical d-spacings on all three axes for SAED?
15:18:03 **7** **A.** We haven't done three-axis SAEDs for
15:18:08 **8** something that is not counted as a regulated asbestos
15:18:11 **9** fiber. Single individual fibers will have the same
15:18:16 **10** d-spacing range, will have the same selected area
15:18:20 **11** electron diffraction zone axis if you go to the
15:18:23 **12** particular orientation.
15:18:25 **13** **Q.** So I'm going to ask again because my
15:18:29 **14** question's only about -- it's not about what you've
15:18:30 **15** done, it's about what something looks like.
15:18:37 **16** Does the SAED for tremolite that has
15:18:39 **17** parallel fibers look exactly the same on three axes
15:18:44 **18** as a tremolite that does not have parallel fibers?
15:18:48 **19** MR. CIRSCH: Object to form.
15:18:49 **20** **Q.** (By Mr. Chachkes) Putting aside whether
15:18:51 **21** you've done it or not, as a matter of science, are
15:18:54 **22** they the same? You can say you don't know, but I
15:18:56 **23** need that question answered.
15:18:57 **24** MR. CIRSCH: Object to form.
15:18:58 **25** THE WITNESS: It should be the same. But
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15:18:59 **1** it's not something that we do, because it's not
15:19:01 **2** part of the peer-reviewed published standard
15:19:04 **3** protocols. When it is -- when it is not
15:19:10 **4** parallel sides or it doesn't meet the 5-to-1
15:19:12 **5** aspect ratio, it is not recorded.
15:19:15 **6** **Q.** (By Mr. Chachkes) Do you know of any
15:19:17 **7** published literature that confirms that they should
15:19:20 **8** be the same?
15:19:21 **9** **A.** It's not -- I believe so, yes.
15:19:35 **10** **Q.** What?
15:19:35 **11** **A.** Again, it has to do with surface charts.
15:19:41 **12** I don't recall the citation.
15:19:42 **13** **Q.** Okay. Sitting here today you can't give
15:19:44 **14** me a citation for that?
15:19:45 **15** **A.** No, sir, I did not anticipate that we were
15:19:48 **16** going to be debating non -- debating asbestos
15:19:54 **17** minerals that we don't count or don't put into our
15:19:58 **18** report.
15:19:58 **19** **Q.** Okay. What about under PLM, does a
15:20:03 **20** tremolite that has parallel fibers look the same
15:20:07 **21** under PLM as a tremolite that does not have parallel
15:20:11 **22** fibers?
15:20:11 **23** **A.** No.
15:20:12 **24** **Q.** What about TEM when you're looking at just
15:20:15 **25** morphology, do the two look the same?
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15:20:18 **1** **A.** If it's not parallel, it's not going to
15:20:20 **2** look the same. If it's PLM and you can't see the
15:20:22 **3** individual fibers in the bundles, it's not going to
15:20:25 **4** look the same.
15:20:25 **5** **Q.** Okay. Do you have a standard reference
15:20:28 **6** standard for PLM for tremolite that does not have
15:20:35 **7** parallel fibers?
15:20:36 **8** **A.** And again, I guess we're going back to a
15:20:39 **9** bottle of cleavage fragments. No. But we do
15:20:42 **10** routinely see tremolite/actinolite cleavage fragments
15:20:48 **11** that are less than 3-to-1 aspect ratio that is
15:20:51 **12** recorded in -- and they have the same properties that
15:20:55 **13** give us the refractive indices and identification.
15:20:57 **14** Otherwise, you wouldn't be able to identify it.
15:20:59 **15** **Q.** Do you have a standard TEM photograph
15:21:03 **16** showing morphology that is for tremolite that does
15:21:08 **17** not exhibit parallel fibers?
15:21:12 **18** **A.** I don't know if we have recorded typical
15:21:17 **19** nonparallel sides on a TEM structure that has the
15:21:22 **20** same chemistry, but we do not record any of our
15:21:26 **21** analyses as per the peer-reviewed published
15:21:30 **22** protocols.
15:21:31 **23** **Q.** Okay. Would your answers be the same for
15:21:36 **24** anthophyllite?
15:21:36 **25** **A.** It would be the same.
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15:21:38 **1** **Q.** Okay. For all those questions whether you
15:21:40 **2** keep the separate standard?
15:21:42 **3** **MS. O'DELL:** Object to the form.
15:21:44 **4** **THE WITNESS:** If -- we don't keep a
15:21:45 **5** separate standard because we do not record
15:21:49 **6** amphibole structures that have the same
15:21:51 **7** chemistry, same diffraction pattern types, that
15:21:55 **8** are not part of the counting protocols for these
15:21:58 **9** peer-reviewed protocols for the analysis.
15:22:01 **10** **Q.** (By Mr. Chachkes) Taking you back to your
15:22:05 **11** November reports, your November 14 reports, it's my
15:22:09 **12** understanding that in it you confirmed that -- that
15:22:28 **13** in it you confirm that the SAED confirmed regulated
15:22:33 **14** asbestos; is that correct?
15:22:35 **15** **MR. CIRSCH:** Object to form.
15:22:36 **16** **THE WITNESS:** We confirmed that the -- I
15:22:42 **17** don't believe we said it like that. What we
15:22:44 **18** confirmed is following the peer-reviewed
15:22:48 **19** published protocols, either for TEM or polarized
15:22:53 **20** light microscopy using the methodology that
15:22:56 **21** takes you through the steps to determine if it's
15:22:59 **22** regulated asbestos, primarily the counting rule,
15:23:02 **23** the chemistry, and the crystalline structure.
15:23:05 **24** That's why they have all three. None of this is
15:23:08 **25** done in a vacuum. That's what we did.
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15:23:11 **1** **Q.** (By Mr. Chachkes) Let me just ask you the
15:23:15 **2** straight question. Did your November report confirm
15:23:17 **3** that SAED patterns confirmed regulated asbestos in
15:23:21 **4** J&J bottles of talc?
15:23:25 **5** **MR. CIRSCH:** Object to form.
15:23:25 **6** **THE WITNESS:** I'd have to see the context
15:23:27 **7** because it has to be all the information that's
15:23:30 **8** done. Regulated asbestos goes with the counting
15:23:34 **9** rules, that's the first -- counting rules on the
15:23:36 **10** structure, parallel sides, the diffraction
15:23:40 **11** pattern, and the chemistry. That's how the
15:23:43 **12** protocol says to do this. Not just an SAED by
15:23:48 **13** itself, not an EDS by itself, and not the
15:23:52 **14** morphology by itself. You have to use all three
15:23:55 **15** for TEM analysis. That's how the protocol goes.
15:24:03 **16** **MR. CHACHKES:** Okay. Let me ask you in
15:24:04 **17** this way. Let's mark this next exhibit.
15:24:23 **18** (Defendants' Exhibit 18 was marked for
15:24:23 **19** identification.)
15:24:23 **20** **Q.** (By Mr. Chachkes) So can you confirm that
15:24:25 **21** Exhibit 18 is one of your SAEDs?
15:24:29 **22** **MR. CIRSCH:** On the back of here I see
15:24:30 **23** some -- okay.
15:24:30 **24** **MS. TROVATO:** On the back -- sorry.
15:24:30 **25** **MR. CHACHKES:** Here. Take mine.
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15:24:32 **1** **MR. CIRSCH:** I wanted to make sure that
15:24:32 **2** you --
15:24:38 **3** **Q.** (By Mr. Chachkes) So can you confirm
15:24:41 **4** Exhibit 18 is of your SAED patterns?
15:24:46 **5** **MS. O'DELL:** Would you direct us? Is
15:24:47 **6** there a specific page in his November report
15:24:48 **7** that you're referring to?
15:24:50 **8** **THE WITNESS:** I see it right here. It's
15:24:51 **9** the M68233-001-001, which matches the M number
15:25:00 **10** and fiber number. It says that we -- date of
15:25:04 **11** photo was 2/14/2018. So that is one of our
15:25:09 **12** diffraction patterns.
15:25:10 **13** **Q.** (By Mr. Chachkes) Okay. Does this
15:25:14 **14** confirm that there is anthophyllite in J&J talc,
15:25:21 **15** Exhibit 18 alone?
15:25:23 **16** **A.** You keep saying alone, and you keep saying
15:25:26 **17** in a vacuum. That's not how it's done. The
15:25:30 **18** methodology doesn't say take the SAED alone. We have
15:25:34 **19** the chemistry that goes with it and the morphology.
15:25:36 **20** There's a reason it takes you through those steps.
15:25:39 **21** **Q.** Okay. So the question is does Exhibit 18
15:25:45 **22** alone confirm anthophyllite?
15:25:49 **23** **MR. CIRSCH:** Object.
15:25:49 **24** **Q.** (By Mr. Chachkes) It's just yes or no.
15:25:50 **25** **MR. CIRSCH:** It's not yes or no.
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15:25:51 **1** THE WITNESS: It's not yes or no. It's --
15:25:54 **2** again, my answer is you do not look at these
15:25:57 **3** patterns alone. You're using a peer-reviewed
15:26:01 **4** published protocol that walks you through
15:26:04 **5** morphology, EDXA, and a diffraction pattern.
15:26:09 **6** That's how the protocol goes.
15:26:11 **7** It's not my protocol. These are the
15:26:13 **8** protocols for the ISO methods, for the AHERA
15:26:16 **9** methods, the ASTM -- TEM methods. There is a
15:26:19 **10** reason you do all of them.
15:26:21 **11** Q. (By Mr. Chachkes) Right. So it's my
15:26:23 **12** understanding that this is an answerable question.
15:26:25 **13** If you say it's completely unanswerable, tell me.
15:26:30 **14** And I understand you don't like it when I've asked
15:26:32 **15** you about something in a vacuum, but the question
15:26:34 **16** stands. In a vacuum, Exhibit 18, is that a uniquely
15:26:37 **17** anthophyllite pattern?
15:26:37 **18** MR. CIRSCH: Object to form. That's been
15:26:39 **19** asked and answered.
15:26:40 **20** THE WITNESS: And my answer stands.
15:26:41 **21** Q. (By Mr. Chachkes) Okay. And that
15:26:43 **22** answer's what? If you're not going to answer, just
15:26:48 **23** tell me.
15:26:48 **24** MS. O'DELL: He's already answered.
15:26:48 **25** MR. CIRSCH: He's already answered the
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15:26:51 **1** question.
15:26:51 **2** THE WITNESS: My answer stands. The
15:26:53 **3** previous answer.
15:26:53 **4** Q. (By Mr. Chachkes) Okay. Now, I'm looking
15:26:54 **5** at Exhibit 17, which I believe corresponds to this;
15:26:58 **6** right?
15:26:58 **7** A. Yes.
15:26:59 **8** Q. Okay. Page 1 of the -- the first
15:27:03 **9** verification, it shows date verified as 2/14. Do you
15:27:07 **10** see that?
15:27:07 **11** A. Correct.
15:27:08 **12** Q. That means on the same day of the photo
15:27:12 **13** you actually put this picture into the software to
15:27:14 **14** determine the d-spacing; correct?
15:27:16 **15** A. That's correct.
15:27:17 **16** Q. Okay. For many of the SAED patterns that
15:27:21 **17** have been produced in this case, the verification
15:27:24 **18** came after your November report; correct?
15:27:27 **19** A. That's correct.
15:27:27 **20** Q. Some of them came after -- came as late as
15:27:33 **21** January; right?
15:27:33 **22** A. That may be possible.
15:27:34 **23** Q. Okay. So you were using, for the purposes
15:27:36 **24** of at least the November report, some of the EDSA
15:27:41 **25** patterns you had not run d-spacing on?
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15:27:44 **1** MR. CIRSCH: Object to form.
15:27:45 **2** THE WITNESS: That's correct. Well, we
15:27:46 **3** had taken the data, and the photograph was
15:27:50 **4** taken. You know, when the verification came
15:27:52 **5** through, it may have been done later.
15:27:54 **6** Q. (By Mr. Chachkes) Yeah, and I might have
15:27:56 **7** misspoke.
15:27:56 **8** So what I'm saying is that for some of the
15:27:58 **9** samples in the November report, you had not run the
15:28:01 **10** d-spacing for the SAED; is that correct?
15:28:04 **11** A. That's possible.
15:28:05 **12** Q. Okay. Is the d-spacing important to
15:28:08 **13** determining whether SAED is pointing towards a
15:28:11 **14** regulated asbestos?
15:28:13 **15** MR. CIRSCH: Object to form.
15:28:14 **16** THE WITNESS: It's all important. If you
15:28:16 **17** do this long enough, you can look at it and say
15:28:18 **18** that's an amphibole diffraction pattern. But
15:28:20 **19** the verification just solidifies it.
15:28:23 **20** Q. (By Mr. Chachkes) Okay. Why did you run
15:28:30 **21** verifications after your first report and as late as
15:28:36 **22** January for SAED verifications?
15:28:41 **23** MR. CIRSCH: Object to form.
15:28:42 **24** THE WITNESS: Because they've all been
15:28:44 **25** taken, just getting to them. Certainly if it
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15:28:46 **1** didn't verify it, then we'd have something else
15:28:49 **2** to talk about today.
15:28:50 **3** Q. (By Mr. Chachkes) How many particles did
15:29:02 **4** your analyst conduct zone axis determinations on?
15:29:05 **5** MR. CIRSCH: Object to form.
15:29:06 **6** THE WITNESS: How many fibrous structures?
15:29:08 **7** Q. (By Mr. Chachkes) Yes.
15:29:09 **8** A. I haven't counted them up.
15:29:10 **9** Q. Could it be about a dozen?
15:29:12 **10** MR. CIRSCH: Object to form.
15:29:13 **11** THE WITNESS: Again, I haven't counted
15:29:14 **12** them up.
15:29:15 **13** Q. (By Mr. Chachkes) Okay. And earlier we
15:29:18 **14** talked about how it's difficult to distinguish talc
15:29:24 **15** and anthophyllite with EDXA; right?
15:29:30 **16** MR. CIRSCH: Object to form.
15:29:31 **17** THE WITNESS: I didn't say it was
15:29:32 **18** difficult. What I said was you would not
15:29:35 **19** identify it by just EDXA. You would use the
15:29:38 **20** procedures in place, all the procedures, to make
15:29:41 **21** that determination if you have fibrous talc
15:29:44 **22** versus anthophyllite.
15:29:44 **23** Q. (By Mr. Chachkes) And when you say all
15:29:45 **24** the procedures, you mean procedures above and beyond
15:29:47 **25** EDXA?
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15:29:48 **1** A. Procedures that are stated in the
15:29:52 **2** peer-reviewed protocols that we use.
15:29:54 **3** Q. That are above and beyond EDXA?
15:29:57 **4** MR. CIRSCH: Object to form.
15:29:59 **5** THE WITNESS: Well, they're all above and
15:30:02 **6** beyond EDXA. None of this is done in a vacuum.
15:30:05 **7** No analyst is just looking at the EDXA and not
15:30:06 **8** following the protocols as published in the
15:30:07 **9** peer-reviewed literature for making these
15:30:09 **10** determinations.
15:30:10 **11** Q. (By Mr. Chachkes) You were saying that a
15:30:11 **12** way to tell the difference between talc and
15:30:15 **13** anthophyllite in SAED is to tilt the goniometer --
15:30:27 **14** A. Goniometer.
15:30:28 **15** Q. -- goniometer; is that right?
15:30:30 **16** A. That's correct.
15:30:31 **17** Q. Okay. In every instance -- are there
15:30:41 **18** instances where you looked at a particle for a J&J
15:30:47 **19** sample in the MDL and tilted the gon --
15:30:56 **20** A. Goniometer.
15:30:56 **21** Q. -- goniometer and determined, oh, well,
15:30:58 **22** that's talc?
15:30:59 **23** A. That's certainly possible.
15:31:06 **24** Q. Okay. Is it that you don't know because
15:31:09 **25** your analyst would have done it and not reported that
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15:31:11 **1** to you?
15:31:12 **2** MR. CIRSCH: Object to form.
15:31:12 **3** THE WITNESS: Well, we were only taking a
15:31:14 **4** random talc verification of some of these for
15:31:17 **5** one fiber, it's at the end of the -- each of the
15:31:21 **6** analyses where there was fibrous talc present in
15:31:24 **7** the TEM, there is an SAED, EDS, and a picture
15:31:30 **8** showing the morphology.
15:31:31 **9** These particular ones are not talc. These
15:31:36 **10** are zone axis. This happens to be the
15:31:41 **11** historical 1978 that was produced through
15:31:47 **12** Lanier, and these zone axis orientations are not
15:31:52 **13** what the so-called look-alike zone axis for the
15:31:57 **14** talc fiber.
15:31:59 **15** Q. (By Mr. Chachkes) I'm sorry, you're
15:32:00 **16** saying that what's in Exhibit 17 are non-MDL samples?
15:32:06 **17** A. No, it is an MDL sample. I said it is an
15:32:08 **18** MDL sample.
15:32:09 **19** Q. Oh, okay. When you said produced through
15:32:11 **20** Lanier, I didn't understand what you meant there.
15:32:14 **21** A. Well, it went to Lanier and went to us.
15:32:18 **22** Q. Okay.
15:32:18 **23** A. The 1978 --
15:32:21 **24** Q. Got it.
15:32:25 **25** A. -- two samples for one container. I think
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15:32:25 **1** it's JBP-084.
15:32:31 **2** Q. Earlier we talked about how cummingtonite
15:32:39 **3** and anthophyllite have the same chemistry; do you
15:32:42 **4** remember that?
15:32:42 **5** A. Yes.
15:32:42 **6** Q. One way to tell them apart is to determine
15:32:45 **7** the crystal system of the particle?
15:32:47 **8** A. Correct. You could go in and do zone axis
15:32:50 **9** and get a monoclinic versus the orthorhombic.
15:32:53 **10** Q. Okay. So anthophyllite is orthorhombic,
15:32:56 **11** and cummingtonite is monoclinic?
15:32:59 **12** A. That is correct.
15:32:59 **13** Q. Okay. Did you do the analysis to
15:33:03 **14** determine whether what you were looking at and
15:33:07 **15** thought might be anthophyllite to see whether it was
15:33:10 **16** monoclinic and thus cummingtonite?
15:33:12 **17** A. No, we don't do that. We just call it the
15:33:15 **18** anthophyllite solid solution series since both
15:33:18 **19** anthophyllite, cummingtonite, and grunerite are
15:33:22 **20** regulated asbestos.
15:33:23 **21** Q. Okay.
15:33:23 **22** A. There's no -- unless you want to do that
15:33:26 **23** for some reason, there's no need to go any further.
15:33:28 **24** Q. Okay. So everything in your expert report
15:33:31 **25** that you identify as anthophyllite could very well be
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15:33:36 **1** cummingtonite, but your position it doesn't matter?
15:33:39 **2** MR. CIRSCH: Object to form.
15:33:40 **3** THE WITNESS: Well, everything could be
15:33:42 **4** anthophyllite and it still doesn't matter. You
15:33:45 **5** know, if you use the analogy, well, I found the
15:33:48 **6** weed and it's a particular weed that is a
15:33:50 **7** problem and we need to get rid of it, now I want
15:33:53 **8** to go look and see what color roots it has
15:33:55 **9** because the weed itself all looks the same.
15:33:58 **10** This particular one, these zone axes are
15:34:00 **11** anthophyllite for, I believe, in these two --
15:34:05 **12** this was the one that Dr. Sanchez says was
15:34:08 **13** cummingtonite, and so we went back and did zone
15:34:11 **14** axis just some time ago. And actually, these
15:34:14 **15** two structures are in fact anthophyllite.
15:34:17 **16** Q. (By Mr. Chachkes) You mean you do zone
15:34:19 **17** axis to determine whether it was orthorhombic or
15:34:22 **18** monoclinic?
15:34:23 **19** A. Well, we did zone axis to make sure that
15:34:25 **20** it was orthorhombic and had the reflections, that it
15:34:28 **21** had the crystalline orientation specific for
15:34:30 **22** orthorhombic anthophyllite.
15:34:32 **23** Q. Did you produce the material that shows
15:34:33 **24** that sample to be orthorhombic?
15:34:36 **25** A. Number 17.
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15:34:37 **1** Q. That's number 17? Okay.
15:34:40 **2** A. The first one, especially. I know for the
15:34:42 **3** 301.
15:34:44 **4** Q. And for the other -- it's fair to say that
15:34:50 **5** most of the particles in this case that you've
15:34:52 **6** identified as anthophyllite could very well be
15:34:55 **7** cummingtonite, but you didn't make the distinction?
15:34:59 **8** MR. CIRSCH: Object to form.
15:34:59 **9** Q. (By Mr. Chachkes) Putting aside whether
15:35:01 **10** it matters or not.
15:35:02 **11** MR. CIRSCH: Object to form.
15:35:03 **12** THE WITNESS: Well, most of these
15:35:06 **13** elongated particles, these asbestiform bundles,
15:35:10 **14** could be anthophyllite --
15:35:11 **15** Q. (By Mr. Chachkes) The ones --
15:35:12 **16** MR. CIRSCH: Hold on.
15:35:13 **17** THE WITNESS: -- versus cummingtonite.
15:35:15 **18** But it's a difference without any consequence.
15:35:18 **19** They're both regulated asbestos.
15:35:19 **20** Q. (By Mr. Chachkes) Right. Putting aside
15:35:21 **21** the difference, okay -- this is just a question that
15:35:25 **22** should be very simple -- most of the part -- except
15:35:28 **23** for the one you went back and verified whether it was
15:35:31 **24** orthorhombic, most of the particles you identify in
15:35:34 **25** your report could either be -- that you identify as
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15:35:37 **1** anthophyllite could either be anthophyllite or
15:35:39 **2** cummingtonite, putting aside whether it even matters;
15:35:42 **3** is that a correct statement?
15:35:43 **4** MR. CIRSCH: Object to form.
15:35:44 **5** THE WITNESS: No. You don't know if most
15:35:46 **6** of the particles could. It could be this, it
15:35:48 **7** could be that. It could be mostly all
15:35:50 **8** anthophyllite.
15:35:52 **9** You know, you think it's all
15:35:54 **10** cummingtonite. But you're right, it doesn't
15:35:55 **11** matter because I identified them as the
15:36:01 **12** anthophyllite solid solution series.
15:36:02 **13** Q. (By Mr. Chachkes) Okay. Is there
15:36:03 **14** literature calling cummingtonite part of the
15:36:05 **15** anthophyllite solid solution series?
15:36:05 **16** A. Lots of it.
15:36:05 **17** Q. Okay. Can you cite one for me? Let's
15:36:10 **18** start with this. Any cited in your report?
15:36:11 **19** A. Yes.
15:36:12 **20** Q. Okay. Can you --
15:36:14 **21** A. Can I show it to you?
15:36:16 **22** Q. Yes, show it to me.
15:36:18 **23** A. And I produced it in other J&J.
15:36:37 **24** It's easier for me just to look through
15:36:41 **25** the references and find it for you.
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15:36:43 **1** Q. That's okay. That's fine. We'll just
15:36:44 **2** leave it as is.
15:36:45 **3** A. I believe it's -- let me just make sure
15:36:46 **4** it's in here.
15:36:55 **5** It's reference 23, Manual of Mineralogy,
15:36:58 **6** 21st Edition, Revised, Cornelis Klein and
15:37:04 **7** Cornelius S. Hurlbut, Jr., from John Wiley & Sons,
15:37:07 **8** and it's on page about 256, if I remember correctly.
15:37:11 **9** Q. Okay. What other mono -- okay.
15:37:15 **10** If your EDS doesn't tell you whether -- if
15:37:19 **11** you haven't determined whether what you're looking at
15:37:21 **12** is orthorhombic or monoclinic, are there any other
15:37:24 **13** minerals that they could be that are indeed also
15:37:28 **14** monoclinic?
15:37:29 **15** A. No. Not after we do the full suite of
15:37:31 **16** analyses. It's one of these regulated asbestos types
15:37:34 **17** for the anthophyllite solid solution series.
15:37:37 **18** Q. Okay.
15:37:37 **19** A. These have been identified to the degree
15:37:42 **20** necessary to make that statement.
15:37:43 **21** Q. Okay. Just -- and we're going to ask a
15:37:45 **22** question in a vacuum, and I understand all your
15:37:48 **23** objections to answering questions about science in a
15:37:50 **24** vacuum, but it's important to us.
15:37:53 **25** If you have an SAED pattern where you
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15:37:56 **1** didn't determine whether it's orthorhombic or not,
15:38:00 **2** just looking at that pattern, in a vacuum, without
15:38:03 **3** your other information, is it possible -- can you
15:38:08 **4** exclude -- is it possible that correlates to any
15:38:12 **5** other monoclinic minerals?
15:38:14 **6** MR. CIRSCH: Object to form.
15:38:15 **7** THE WITNESS: I've already answered this
15:38:16 **8** question.
15:38:16 **9** We don't look at it in a vacuum. You're
15:38:18 **10** asking me to look at things in a vacuum that are
15:38:21 **11** not part of the peer-reviewed published
15:38:25 **12** identification protocols for asbestos.
15:38:27 **13** That's what we do. We look at and follow
15:38:29 **14** the procedures that are in the protocols. So
15:38:33 **15** when we do this analysis, especially for
15:38:36 **16** anthophyllite, we're looking at morphology,
15:38:38 **17** we're looking at chemistry, and we're looking at
15:38:40 **18** selected area electron diffraction.
15:38:43 **19** Q. (By Mr. Chachkes) So --
15:38:43 **20** MR. CIRSCH: Hold on.
15:38:44 **21** THE WITNESS: And that's my answer.
15:38:45 **22** Q. (By Mr. Chachkes) So you understand I'm
15:38:46 **23** allowed to ask questions that aren't specifically
15:38:49 **24** correlating to something in a regulation; right? I
15:38:51 **25** can ask about general science. You understand that;
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15:38:53 **1** right?

15:38:54 **2** MR. CIRSCH: Object to form. He can give

15:38:56 **3** you an answer --

4 Q. (By Mr. Chachkes) Yes or no?

15:38:57 **5** MR. CIRSCH: -- he thinks is appropriate.

15:38:59 **6** Q. (By Mr. Chachkes) It's a yes or no

15:39:01 **7** question.

15:39:01 **8** A. Well, yes, you can ask any question you

15:39:04 **9** want. But, no, I don't think it's appropriate to ask

15:39:07 **10** questions that is not part of how we identify and ask

15:39:12 **11** in a vacuum. So my answer stands.

15:39:13 **12** Q. Okay. So I'll ask you again, and if you

15:39:14 **13** don't want to answer, you can give me the same

15:39:16 **14** circular answer, but I'm going to ask you again.

15:39:19 **15** MR. CIRSCH: Object to the commentary on

15:39:21 **16** the record, Alex. There's a lot of it.

15:39:23 **17** Q. (By Mr. Chachkes) If the -- looking at --

15:39:26 **18** if you haven't determined whether something is

15:39:29 **19** orthorhombic or not, looking at the SAED pattern in a

15:39:36 **20** vacuum, could it correspond to other minerals besides

15:39:40 **21** cummingtonite and anthophyllite?

15:39:43 **22** MR. CIRSCH: Object to form.

15:39:45 **23** THE WITNESS: That's not how we have done

15:39:46 **24** this analysis for every one of these samples

15:39:49 **25** that we're dealing with in TEM, for the 100,
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15:39:52 **1** almost 200 fibers and bundles that we've

15:39:55 **2** identified. We have used the peer-reviewed

15:39:59 **3** standard published protocol specifically to

15:40:02 **4** identify regulated asbestos. We didn't look at

15:40:05 **5** anything in a vacuum. We don't do that.

15:40:07 **6** Q. (By Mr. Chachkes) Okay. Putting that

15:40:09 **7** aside, this is just a matter of EDSA science. EDSA

15:40:14 **8** science tells me that Exhibit 18 looked at in

15:40:19 **9** isolation could correspond to many minerals; right?

15:40:25 **10** MS. O'DELL: Objection.

15:40:25 **11** Q. (By Mr. Chachkes) Just EDSA science?

15:40:28 **12** A. Again, we're not dealing with many

15:40:30 **13** minerals. We're dealing with regulated asbestos in a

15:40:33 **14** talc deposit that has the ability to form these

15:40:37 **15** billions of years ago under temperature and pressure.

15:40:40 **16** We're using protocols that are specifically designed

15:40:42 **17** to identify regulated asbestos. And that's what we

15:40:45 **18** do.

19 Q. Okay.

15:40:47 **20** A. Asking things in a vacuum or hypotheticals

15:40:49 **21** is not what we did.

15:40:51 **22** MR. CHACHKES: Okay. How much time do we

15:40:55 **23** have left on the tape?

15:40:59 **24** THE VIDEOGRAPHER: 17.

15:41:00 **25** MR. CHACHKES: Why don't we just swap out
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15:41:02 **1** the tape and we don't have to take a break.

15:41:13 **2** (Recess from 3:41 p.m. to 4:01 p.m.)

16:02:00 **3** Q. (By Mr. Chachkes) Dr. Longo, the court

16:03:00 **4** reporter informed me that a couple of times I

16:03:01 **5** mispronounced EDXA as EDSA. Did you understand when

16:03:08 **6** I said EDSA to mean EDXA?

16:03:09 **7** A. Yes. Energy dispersive spectroscopy

16:03:12 **8** analysis is also well known.

9 Q. Okay.

16:03:14 **10** A. People have different acronyms for it, so

16:03:18 **11** it's fine. I think I was repeating what you were

16:03:20 **12** saying.

16:03:20 **13** Q. Okay. So is it your position that

16:03:24 **14** reporting analytical sensitivity by weight percent

16:03:27 **15** does not provide any useful information for

16:03:30 **16** determining potential airborne exposure to asbestos

16:03:32 **17** structures?

16:03:32 **18** A. Yes.

16:03:33 **19** Q. Is it your position that structures per

16:03:37 **20** gram data is the most useful for potential airborne

16:03:40 **21** exposure?

16:03:40 **22** A. Yes.

16:03:41 **23** Q. And in your report, in support of that

16:03:44 **24** proposition, you cite ISO 10312; correct?

16:03:50 **25** A. Correct. And it's in both of the ISO
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16:03:51 **1** methods.

16:03:51 **2** Q. Okay. ISO 10312 is a method for detecting

16:03:57 **3** asbestos in ambient air; correct?

16:03:58 **4** A. Correct.

16:03:59 **5** Q. Have you ever conducted air testing

16:04:02 **6** pursuant to the ISO 10312 method?

16:04:08 **7** A. In the past, yes.

16:04:10 **8** Q. Okay. How many times?

16:04:14 **9** A. I don't know.

16:04:15 **10** Q. Over ten?

16:04:16 **11** A. I don't know.

16:04:16 **12** Q. Over one?

16:04:18 **13** A. Most likely over one, but how big the

16:04:23 **14** bread box is, I don't know.

16:04:25 **15** Q. Okay. Did you test anything under the

16:04:30 **16** ISO 10312 method for this case, the MDL?

16:04:36 **17** A. Well, if you look at our report, we have

16:04:38 **18** referenced a number of TEM methods for the counting

16:04:40 **19** rules, including the two ISO methods, the ASTM

16:04:46 **20** method, the AHERA method. They all have the same

16:04:48 **21** counting rules for the determination of a regulated

16:04:51 **22** asbestos fiber. The ISO methods are referred back to

16:04:56 **23** in both the 22262-1 and -2 as the counting criteria

16:05:01 **24** for fibers and bundles.

16:05:03 **25** Q. Did you do an ISO 10312 ambient air test
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16:05:07 **1** for the purposes of this MDL?
16:05:09 **2** **A.** No.
16:05:09 **3** **Q.** And this ISO method involves collecting
16:05:14 **4** air samples and testing for fibers; correct?
16:05:17 **5** **A.** Correct.
16:05:17 **6** **Q.** And you're not testing ambient air fibers
16:05:19 **7** in this case, in this expert report?
16:05:22 **8** **A.** No, we're not testing ambient air. But
16:05:25 **9** you have to understand once the asbestos gets on the
16:05:27 **10** filter, the -- and I know it sounds silly, but the
16:05:32 **11** asbestos fibers don't know if it came out of ambient
16:05:34 **12** air, if it came out of a water sample, came out of a
16:05:37 **13** dust sample, or it came out of a bulk sample like
16:05:40 **14** cosmetic talc. What's most important is the counting
16:05:43 **15** rules that are the same for all these different
16:05:47 **16** methods, as in the ISO 22262-2 for the TEM analysis
16:05:52 **17** of talc.
16:05:53 **18** **Q.** You did not conduct an exposure assessment
16:05:55 **19** for this case, did you?
16:05:56 **20** **A.** I haven't conducted an exposure assessment
16:06:01 **21** with any MDL samples.
16:06:04 **22** **Q.** You did employ ISO 22262; correct?
16:06:08 **23** **A.** Yes.
16:06:08 **24** **Q.** That does not include a formula for
16:06:12 **25** reporting of data as structures per gram; correct?
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16:06:15 **1** **A.** That's correct.
16:06:15 **2** **Q.** The --
16:06:18 **3** **A.** Well, that's not quite true. If you go to
16:06:20 **4** the ISO TEM method that it references, it shows you
16:06:25 **5** how to report it in fibers or bundles per gram. So
16:06:30 **6** again, you have to look at the methodology that it
16:06:33 **7** references.
16:06:34 **8** **Q.** Okay. So let me -- which ISO, 1, 2, 3 --
16:06:39 **9** can you tell me -- are you referring to?
16:06:40 **10** **A.** It's the 137 --
16:06:43 **11** **Q.** ISO -- so it's part 1; correct?
16:06:47 **12** **A.** Well, it's in both. It's in part 1 and
16:06:50 **13** part 2.
16:06:50 **14** **Q.** Okay. So can you point to me in part 2
16:06:54 **15** where -- and that's Exhibit 3 -- where it says --
16:06:57 **16** that proper reporting is done in structures per gram?
16:07:02 **17** **A.** Did you mark that as an exhibit?
16:07:08 **18** **Q.** Exhibit 3, yeah. It's going to be down
16:07:11 **19** from the beginning.
16:07:13 **20** **A.** It's 1. Give me a second. I will in a
16:07:27 **21** second. I'm sure it's in this pile.
22 **MR. CIRSCH:** It might be there.
16:07:36 **23** **THE WITNESS:** There it is.
16:07:40 **24** **Q.** (By Mr. Chachkes) It should be Exhibit 3.
16:07:41 **25** Okay.
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16:07:44 **1** **A.** So if you go to 16 --
16:07:51 **2** **MR. CIRSCH:** You're calling it Exhibit 3,
16:07:53 **3** but it says on here Exhibit 5. I just want to
16:07:56 **4** make sure that --
16:07:57 **5** **MR. CHACHKES:** So Exhibit 3 should be
16:08:01 **6** ISO-2?
16:08:02 **7** **MR. CIRSCH:** It's got Exhibit 5 on it.
16:08:03 **8** **Q.** (By Mr. Chachkes) I'm sorry, I'm reading
16:08:05 **9** my number wrong -- strike that. My 3 looked like --
16:08:09 **10** totally my fault.
16:08:10 **11** All right. Before you is Exhibit 5, which
16:08:14 **12** is part 2 of the ISO 22262 standard. Can you point
16:08:17 **13** to me where it requires reporting in structures per
16:08:22 **14** gram?
16:08:24 **15** **A.** If you go to 16.3, last paragraph before
16:08:33 **16** you get to 17, it says, If it is required to include
16:08:37 **17** all fiber sizes in the measurement, determination of
16:08:40 **18** mass fraction by TEM using 14.2.4 is the optimum
16:08:46 **19** analytical procedure.
16:08:47 **20** If you go to 14.2.4 -- 14.2.4.4,
16:09:12 **21** Preparation of specimens for SEM or TEM observation,
16:09:17 **22** then it references back to the ISO 13794.
16:09:22 **23** **Q.** Okay. So you -- it's your understanding
16:09:25 **24** that the ISO 22262 -- so first of all, the ISO 22262
16:09:31 **25** -2, putting aside cross-references, itself doesn't
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16:09:36 **1** have a formula for reporting data as structures per
16:09:39 **2** gram; correct?
16:09:40 **3** **A.** That is correct.
4 **Q.** Okay.
16:09:41 **5** **A.** And it doesn't have the formula for
16:09:43 **6** calculating weight percent. It points you back to
16:09:48 **7** the ISO TEM protocols.
16:09:51 **8** **Q.** Okay. And then the reference to 14.2.4,
16:09:55 **9** that section is entitled, Determination of asbestos
16:10:00 **10** weight mass fraction from fiber measurement made by
16:10:03 **11** PLM, SEM, or TEM.
16:10:04 **12** That's the title; right?
16:10:06 **13** **A.** Correct.
16:10:06 **14** **Q.** Okay. I just want to do a little walk
16:10:11 **15** through one of the calculations you made so I can
16:10:13 **16** figure it out.
16:10:14 **17** Can I have the exhibits? Mark this as
18 Exhibit 19.
19 (Defendants' Exhibit 19 was marked for
16:10:17 **20** identification.)
16:10:48 **21** **Q.** (By Mr. Chachkes) Okay. Can you tell me
16:10:51 **22** just on a high level what this spreadsheet,
16:10:52 **23** Exhibit 19, is meant to represent?
16:10:53 **24** **A.** This represents the weight of the sample
16:10:54 **25** that was used, it represents the weight of the sample
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16:10:59 **1** analyzed per grid opening, it tells you what the
16:11:04 **2** filter size was, it tells you how many regulated
16:11:06 **3** asbestos structures, and then it gives you the
16:11:08 **4** calculation of how many asbestos structures per gram,
16:11:15 **5** which if you're doing weight percent, you have to do
16:11:18 **6** all the same -- get all the same information, but
16:11:22 **7** instead of stopping at the number of structures per
16:11:26 **8** gram, then you go through the calculation to
16:11:29 **9** determine the weight of each of the structures and
16:11:33 **10** then calculate a mass weight percent.
16:11:35 **11** **Q.** Okay. So in Exhibit 19, I guess, on the
16:11:40 **12** upper left I see a .03135. That's the initial weight
16:11:46 **13** prior to concentration method, or is that after
16:11:51 **14** concentration?
16:11:52 **15** **A.** That is the weight prior to the
16:11:54 **16** concentration method.
16:11:55 **17** **Q.** Okay. So that's basically the
16:12:00 **18** unconcentrated weight that you are trying to
16:12:02 **19** determine how many structures are in there?
16:12:05 **20** **A.** Correct.
16:12:07 **21** **Q.** And you use a Sartorius scale; right?
16:12:14 **22** **A.** That's correct.
16:12:14 **23** **Q.** Does it have that many significant digits?
16:12:16 **24** **A.** It does.
16:12:17 **25** **Q.** Okay. Does it have more than that, or is
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16:12:19 **1** that it?
16:12:20 **2** **A.** Let's see. One, two, three, four, five.
16:12:24 **3** I think it has six.
16:12:26 **4** **Q.** Okay. But you only report five
16:12:29 **5** significant digits; correct?
16:12:31 **6** **A.** Correct.
16:12:31 **7** **Q.** And then your analysts conduct heavy
16:12:38 **8** liquid density separation; right?
16:12:40 **9** **A.** Correct.
16:12:40 **10** **Q.** After separation you have basically an
16:12:42 **11** amphibole sludge and with much of the talc removed?
16:12:48 **12** **A.** Correct.
16:12:48 **13** **Q.** And what is the percentage of talc from
16:12:53 **14** amphibole separation your analysts achieve in this
16:12:56 **15** analysis?
16:12:57 **16** **A.** We haven't measured that.
16:12:58 **17** **Q.** Do you have the data and just didn't put
16:13:04 **18** it on the sheet, or you just -- you don't even have
16:13:05 **19** the data?
16:13:05 **20** **A.** We don't measure the amount that we
16:13:07 **21** removed.
16:13:08 **22** **Q.** Okay. Is there a way to calculate it?
16:13:12 **23** **MR. CIRSCH:** Object to form.
16:13:13 **24** **THE WITNESS:** Not without making the
16:13:15 **25** measurement, no.
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16:13:15 **1** **Q.** (By Mr. Chachkes) If you're analyzing two
16:13:17 **2** samples and sample A contains more amphiboles than
16:13:21 **3** sample B, would you expect that following the
16:13:25 **4** concentration there would be more products separated
16:13:27 **5** out from A than B?
16:13:29 **6** **A.** I don't know if you can measure that. If
16:13:32 **7** it contains more amphibole fibers in the final
16:13:37 **8** supernate, then you would have more fibers that you
16:13:41 **9** counted.
16:13:42 **10** **Q.** And by supernate, that's kind of a synonym
16:13:47 **11** for amphibole sludge --
16:13:49 **12** **A.** Well, it's the pellet. Whatever has gone
16:13:52 **13** down to the bottom of the centrifuge tube, any
16:13:56 **14** potential amphiboles, some talc particles, you always
16:14:00 **15** see talc particles, so it's not 100 percent
16:14:03 **16** efficient.
16:14:03 **17** **Q.** The supernate's the solids that are left
16:14:06 **18** over after the concentration?
16:14:07 **19** **A.** Correct.
16:14:08 **20** **Q.** So you can't say that if one sample has
16:14:10 **21** more amphiboles than another that there will be more
16:14:13 **22** supernate in the former than the latter?
16:14:17 **23** **A.** You would expect -- if it has more in
16:14:19 **24** there you would expect more, but it's pretty tough to
16:14:22 **25** make that determination before you measure it.
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16:14:24 **1** **Q.** Yeah, I'm not asking you for a
16:14:26 **2** calculation. I'm just saying just seems like common
16:14:29 **3** sense if you've got more to concentrate out, you'll
16:14:33 **4** get more concentrate.
16:14:34 **5** **MR. CIRSCH:** Object to form.
16:14:35 **6** **THE WITNESS:** All things being equal,
16:14:37 **7** that's correct.
16:14:38 **8** **Q.** (By Mr. Chachkes) Okay. After separation
16:14:38 **9** you did not weigh the centrifuge that remained -- you
16:14:42 **10** did not weigh the supernate that remained after
16:14:48 **11** desiccation; correct?
16:14:49 **12** **A.** That's correct.
16:14:50 **13** **Q.** And I see a number, weight of sample
16:14:56 **14** analyzed; do you see that there?
16:14:58 **15** **A.** Correct.
16:14:58 **16** **Q.** That's more significant digits than in the
16:15:02 **17** initial weight; correct?
16:15:06 **18** **A.** That's correct. You take the amount that
16:15:07 **19** has theoretically gone down onto the filter, what you
16:15:12 **20** start with, so that if you have 31.35, then you
16:15:18 **21** calculate what's on the overall filter, and then you
16:15:20 **22** calculate how many grid openings you look at, then
16:15:23 **23** it's just the math.
16:15:24 **24** **Q.** Yeah, now my question is just about
16:15:25 **25** significant digits. You understand why significant
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16:15:28 **1** digits are important; right?

16:15:29 **2** **A.** Yeah, but that's a mathematical

16:15:33 **3** determination of significant digits.

16:15:34 **4** **Q.** Right. Significant digits are important

16:15:37 **5** because if I have a number with three significant

16:15:40 **6** digits multiplied times a number with four

16:15:45 **7** significant digits, the result should be reflecting

16:15:51 **8** the least number of significant digits that went into

16:15:53 **9** the equation; correct?

16:15:55 **10** **MR. CIRSCH:** Object to form.

16:15:56 **11** **THE WITNESS:** You can do it that way if

16:15:57 **12** you like, or you can put it out to the

16:15:59 **13** significant digits and then round it.

16:16:01 **14** **Q.** (By Mr. Chachkes) Okay. Shouldn't you

16:16:04 **15** have rounded the weight of the sample analyzed

16:16:06 **16** because you've got more significant digits -- you've

16:16:08 **17** got more digits than there are significant digits?

16:16:10 **18** **A.** No. It's a mathematical -- it's a

16:16:13 **19** mathematical equation or just simply dividing it on

16:16:18 **20** how much of the original sample would cover the

16:16:21 **21** filter.

16:16:22 **22** **Q.** Okay. You've got a -- I'm going to phrase

16:16:25 **23** this a different way.

16:16:26 **24** You've got a greater precision in your

16:16:29 **25** weight of sample analyzed than you do with the
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16:16:31 **1** precision of the numbers that went into it?

16:16:35 **2** **MR. CIRSCH:** Object to form.

16:16:36 **3** **THE WITNESS:** I don't think it's any more

16:16:38 **4** precision. It's taking the weight and dividing

16:16:40 **5** it onto the filter, and then from the filter

16:16:43 **6** you're looking at a number of area by 100 grid

16:16:45 **7** openings, so you're calculating what the weight

16:16:48 **8** would be if you put the whole -- to go back to

16:16:52 **9** the sample to determine the amount of fibers.

16:16:55 **10** That's just the way it's done.

16:16:56 **11** **Q.** (By Mr. Chachkes) Does your Sartorius

16:16:59 **12** scale have the capability of measuring a sample down

16:17:01 **13** to .00017187 grams?

16:17:05 **14** **A.** Not the Sartorius, but we do have a

16:17:08 **15** microbalance, but that's not how this is done.

16:17:11 **16** **Q.** So the -- this is just a yes or no. The

16:17:18 **17** weight of sample analyzed is a number that is a

16:17:24 **18** calculation; right?

16:17:26 **19** **MR. CIRSCH:** Object to form.

16:17:26 **20** **THE WITNESS:** Yes.

16:17:28 **21** **Q.** (By Mr. Chachkes) Okay. And the

16:17:29 **22** structures per gram of sample, that's also a number

16:17:31 **23** that's calculated; right?

16:17:34 **24** **A.** That's correct.

16:17:34 **25** **Q.** And what's the equation to get me the
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16:17:42 **1** weight of sample analyzed?

16:17:44 **2** **A.** Well, you go back to the individual

16:17:46 **3** structures and you multiply the length by the width

16:17:52 **4** squared times the density of the particular type of

16:17:56 **5** amphibole times pi. And then all those are added up,

16:17:59 **6** and then you then go from the adding that up to what

16:18:03 **7** the overall weight would be on the filter.

16:18:05 **8** **Q.** Okay. And the weight of sample analyzed

16:18:10 **9** is for one grid opening, ten grid openings, 100 grid

16:18:16 **10** openings? What is it?

16:18:17 **11** **A.** That's, as I believe, that's one grid

16:18:19 **12** opening.

16:18:19 **13** **Q.** Okay. So if you wanted to extrapolate,

16:18:25 **14** putting aside --

16:18:26 **15** **A.** I may be wrong on that. I have to check

16:18:29 **16** that. I think it's all 100.

16:18:30 **17** **Q.** Okay, if that's all 100. Now, that's what

16:18:37 **18** percentage of the total supernate?

16:18:38 **19** **A.** We haven't measured the total supernate.

16:18:41 **20** We measure what we start with because the

16:18:43 **21** calculations go back to what you start with. We

16:18:46 **22** don't measure the supernate.

16:18:48 **23** **Q.** What percentage of what you started with

16:18:50 **24** is it?

16:18:51 **25** **A.** We started with 31 milligrams, and that is
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16:19:03 **1** 0.17. Well, we started with 0.3135 grams, and that

16:19:10 **2** is .00017187 grams. So just divide the two.

16:19:15 **3** **Q.** So is there any need to extrapolate here,

16:19:22 **4** or is 100 percent of the supernate being looked at?

16:19:26 **5** **A.** You're putting 100 percent of the

16:19:31 **6** supernate down onto the filter.

16:19:32 **7** **Q.** And that's 100 grid openings?

16:19:34 **8** **A.** Well, the filter is 201 millimeters

16:19:38 **9** squared. That's the filter where the material is put

16:19:41 **10** through the filter to collect it.

16:19:43 **11** And then you're looking at 100 grid

16:19:45 **12** openings. So 100 grid openings is 1.1 millimeter.

16:19:50 **13** So 1.1 millimeter of the 201 millimeters will now

16:19:54 **14** give you the percentage of what you're looking at on

16:19:56 **15** that filter.

16:19:57 **16** **Q.** Why are you calculating that percentage?

16:20:02 **17** Isn't 100 percent of what comes through the filter in

16:20:05 **18** the grid openings -- in the 100 grid openings?

16:20:07 **19** **MR. CIRSCH:** Object to form.

16:20:08 **20** **THE WITNESS:** No.

16:20:08 **21** **Q.** (By Mr. Chachkes) Okay.

16:20:09 **22** **A.** Can I draw on something?

16:20:11 **23** **Q.** Yeah.

16:20:13 **24** **A.** The filter is much bigger than 100 grid

16:20:15 **25** openings.
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16:20:16 **1** Q. Let me just -- here --
16:20:18 **2** MR. CIRSCH: Here you go.
16:20:22 **3** MR. CHACHKES: That would be great. Thank
16:20:22 **4** you.
16:20:22 **5** THE WITNESS: So if you have a filter
16:20:23 **6** that's this big -- that's not bad -- and then
16:20:27 **7** your grids are 3 millimeters. So -- shall I
16:20:34 **8** make a happy face here?
16:20:36 **9** Q. (By Mr. Chachkes) Please don't.
16:20:37 **10** A. So each one of these grid openings -- and
16:20:46 **11** I'm blowing it up.
16:20:50 **12** So you're taking 7 millimeter plugs and
16:20:53 **13** then each grid opening has 100 grids that are 100 by
16:20:57 **14** 100 microns, typically. So the material is going on
16:21:01 **15** this whole filter, and then you're just taking
16:21:04 **16** sections of the filter out for your TEM grids.
16:21:07 **17** MR. CHACHKES: I see.
16:21:08 **18** So can we just mark this as an exhibit,
16:21:12 **19** Exhibit 20, please.
16:21:13 **20** (Defendants' Exhibit 20 was marked for
21 identification.)
16:21:19 **22** THE WITNESS: I didn't know you were going
16:21:21 **23** to mark it.
16:21:21 **24** Q. (By Mr. Chachkes) You did know I was
16:21:23 **25** going to mark it.
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16:21:24 **1** A. That's true.
16:21:26 **2** Q. So what you've drawn in Exhibit 20 -- so I
16:21:31 **3** just want to get my vocabulary correct -- that the
16:21:33 **4** filter size is the big white circle in which you've
16:21:35 **5** got the three dots, that's the -- thank you for
16:21:35 **6** marking that.
16:21:35 **7** A. Filter, which is 201 millimeters squared.
16:21:41 **8** Q. Got it.
16:21:42 **9** A. And that's the filtration area so you're
16:21:46 **10** always -- because it's in a device that holds it,
16:21:49 **11** it's not the whole size of the filter, but it's
16:21:52 **12** actually the area where filtrate is going down
16:21:55 **13** through it.
16:21:56 **14** Q. Right. Okay.
16:21:56 **15** MR. CIRSCH: You're pulling those numbers
16:21:57 **16** from Exhibit 19; correct?
16:21:59 **17** THE WITNESS: Yes. It's the same size for
16:22:00 **18** every one.
16:22:01 **19** MR. CHACHKES: And if you would not
16:22:03 **20** comment.
16:22:04 **21** Q. (By Mr. Chachkes) And the black dots that
16:22:05 **22** you have there, those are the grid openings?
16:22:08 **23** A. Those are the grids.
16:22:09 **24** Q. Okay.
16:22:09 **25** A. So a grid -- and this has been blown up --
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16:22:17 **1** is approximately 3 millimeters in diameter. Now, on
16:22:23 **2** this grid are openings.
16:22:24 **3** Q. Okay.
16:22:24 **4** A. And each one of these openings looks like
16:22:35 **5** this, and they are 100 micrometers in width in two
16:22:47 **6** directions. So when you look at a grid opening,
16:22:49 **7** you're looking in this area.
16:22:51 **8** Q. Okay. And I apologize for repeating it a
16:22:56 **9** little bit, but the -- just want to make sure the
16:22:59 **10** transcript's clear to correspond with the picture.
16:23:02 **11** You've got drawn, it looks like a circle
16:23:06 **12** with three black dots, that's the filter, and in the
16:23:09 **13** filter there are -- those black dots are grids;
16:23:12 **14** correct? So far correct?
16:23:13 **15** A. So far correct.
16:23:14 **16** Q. Okay. And how many grids -- I know your
16:23:17 **17** picture only has three, but how many grids are
16:23:20 **18** actually in your filter in the lab?
16:23:22 **19** A. We make three grids.
16:23:24 **20** Q. Oh, so there are three grids?
16:23:26 **21** A. Correct.
16:23:27 **22** Q. And then you've drawn a couple arrows to
16:23:29 **23** emphasize what the grid is, and the grid has got
16:23:32 **24** basically a bunch of grid openings and that's 100
16:23:34 **25** grid openings?
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16:23:35 **1** A. Correct.
16:23:36 **2** Q. Okay. And each grid opening is, you said,
16:23:39 **3** 10 micrometers?
16:23:40 **4** A. 100 micrometers.
16:23:41 **5** Q. 100 micrometers. Got it.
16:23:43 **6** A. 100 micrometers, essentially a square, 100
16:23:49 **7** micrometers for each XY dimension.
16:23:51 **8** Q. Okay. And when you extrapolate filters --
16:23:59 **9** if the fibers you find in the filters back to the
16:24:03 **10** original weight of the sample, can you just walk me
16:24:06 **11** through that in conceptual terms?
16:24:08 **12** A. In conceptual terms, you know the area
16:24:12 **13** you've analyzed by the grid openings. You know the
16:24:15 **14** area of your filter, and you take the -- you
16:24:20 **15** determine the ratio of the amount of material on the
16:24:25 **16** filter and then go to the amount of material that
16:24:28 **17** would be on each grid opening, and then you take the
16:24:32 **18** number of fibers you have and then you
16:24:36 **19** back-calculate.
16:24:36 **20** So if I have three fibers in a known
16:24:39 **21** amount, and that amount is some percentage of the
16:24:43 **22** overall amount that I know that in the overall amount
16:24:46 **23** on the filter, this is how many fibers and bundles
16:24:52 **24** would be there because you have to assume a
16:24:56 **25** homogenous distribution on the filter.
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16:24:58 **1** Q. And do you look at the -- for your fiber
16:25:05 **2** count, do you look at each of the three grids?
16:25:08 **3** A. We keep one for archive; we look at two
16:25:11 **4** grids and 50 openings on each grid.
16:25:13 **5** Q. Okay. And why only 50 openings on each
16:25:18 **6** grid?
16:25:18 **7** A. Well, typically the standard protocols,
16:25:23 **8** the peer-reviewed protocols, usually state two grid
16:25:28 **9** openings -- two grids, and so we put 50 on one and 50
16:25:33 **10** on the other.
16:25:34 **11** Q. Why not 100 on one and 100 on the other?
16:25:37 **12** A. Well, that would take twice as much time.
16:25:40 **13** And you could do that, or you could look at 300. It
16:25:45 **14** doesn't change anything other than reduce your --
16:25:48 **15** increase your analytical sensitivity.
16:25:50 **16** Q. Okay. Does the ISO 22262-2 lay out this
16:26:00 **17** math for extrapolating from looking at a grid?
16:26:05 **18** A. No. It referenced the protocols. All TEM
16:26:11 **19** analyses -- air sample, water sample, bulk sample --
16:26:15 **20** is done in this manner. All analytical chemistry is
16:26:19 **21** done in this manner.
16:26:20 **22** If you take a gallon of water out of Lake
16:26:24 **23** Michigan and you want to determine the amount of lead
16:26:26 **24** in there, for example, hypothetical, you don't
16:26:28 **25** measure the whole gallon, you measure, typically, a
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16:26:32 **1** couple of milliliters of the material and then you
16:26:34 **2** extrapolate back on the overall concentration that
16:26:37 **3** would be there.
16:26:38 **4** The ISO TEM air sample method is the same
16:26:40 **5** way. You're analyzing it and you find 4 or 5 fibers
16:26:46 **6** in the grid opening, you're extrapolating back to
16:26:49 **7** what is in the air samples.
16:26:51 **8** Q. Okay. Now, when you said the
16:26:57 **9** peer-reviewed literature suggests looking at two of
16:27:00 **10** the grids, can you give me an example of some such
16:27:05 **11** literature?
16:27:05 **12** A. Well, there's lots of peer-reviewed
16:27:07 **13** literature that used the standard protocols. If you
16:27:09 **14** look at the AHERA, you look at ISO, you look at the
16:27:12 **15** NIOSH 7402, you look at the PCM, anything that has to
16:27:18 **16** do with TEM, you have two grid openings. The 7402
16:27:23 **17** says 40 openings among two grids.
16:27:28 **18** If you have a high number of fibers, then
16:27:31 **19** you may stop on your second opening on one grid and
16:27:34 **20** then go to the second grid. So the protocols
16:27:38 **21** themselves state that.
16:27:39 **22** Q. Okay. Your analysts employed ISO 22262-2
16:27:44 **23** to test for asbestos by TEM; is that correct?
16:27:46 **24** A. Yes.
16:27:47 **25** Q. And they use TEM to identify the particles
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16:27:55 **1** morphologically as asbestos; is that correct?
16:27:58 **2** MR. CIRSCH: Object to form.
16:27:59 **3** THE WITNESS: They use TEM to identify
16:28:01 **4** regulated asbestos using morphology, EDXA and
16:28:08 **5** SAED.
16:28:09 **6** Q. (By Mr. Chachkes) Okay. So is there a
16:28:10 **7** phrase that I can use that's not confusing to refer
16:28:12 **8** to the visual aspect of TEM that's not, you know,
16:28:16 **9** SAED or the other more different techniques?
16:28:19 **10** A. Well, if you say all the counting rules
16:28:21 **11** for all the standard TEM methods that is not the
16:28:26 **12** occupational exposure counting rules, they will all
16:28:30 **13** state the same thing.
16:28:31 **14** Q. No, I'm just looking for a -- I want to
16:28:33 **15** make sure we're speaking a common language, the
16:28:36 **16** visual --
16:28:37 **17** A. How about just counting rules?
16:28:38 **18** Q. Well, we disagree as to what the counting
16:28:40 **19** rules require.
16:28:41 **20** So if I say the visual aspect of TEM as
16:28:46 **21** opposed to the SAED and -- what do you call it when
16:28:57 **22** you take a picture with the TEM?
16:28:59 **23** MR. CIRSCH: Object to form.
16:29:00 **24** THE WITNESS: Photomicrograph.
16:29:01 **25** Q. (By Mr. Chachkes) Okay. So they use
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16:29:02 **1** photomicrographs to determine -- from the TEM to
16:29:05 **2** determine morphology?
16:29:06 **3** A. No. They use the counting rules to
16:29:08 **4** determine morphology, that it has parallel sides,
16:29:12 **5** it's greater than .5 micrometers in length, it has at
16:29:15 **6** least a 5-to-1 aspect ratio, and the chemistry in
16:29:20 **7** SAED determines it to be a regulated asbestos, then
16:29:23 **8** it's a regulated asbestos fiber.
16:29:25 **9** Q. I didn't ask what you look at to determine
16:29:28 **10** whether it's asbestos or not.
16:29:29 **11** What do you -- what physically are you
16:29:33 **12** looking at to determine morphology? It's the
16:29:35 **13** photomicrograph; right?
16:29:37 **14** MR. CIRSCH: Object to form.
16:29:37 **15** THE WITNESS: No. We're visually looking
16:29:40 **16** through the microscope. And I'll use an
16:29:42 **17** example. I'm looking at a magnification of
16:29:46 **18** approximately 20,000 times, and in my field of
16:29:49 **19** view a structure looking like this pen shows up.
16:29:55 **20** The first thing I do is look at it and say
16:29:57 **21** does it have parallel sides? The answer is yes.
16:30:00 **22** We have calibration standards and go is it
16:30:03 **23** greater than .5 micrometers in length? Yes.
16:30:08 **24** Does it have an aspect ratio of greater than
16:30:11 **25** 5-to-1? I can visually see that, but we take a
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16:30:14 **1** photomicrograph -- it's close -- to make sure.
 16:30:16 **2** **Q.** (By Mr. Chachkes) So you use visual
 16:30:18 **3** inspection through the TEM to determine morphology?
 16:30:22 **4** **MR. CIRSCH:** Object to form.
 16:30:23 **5** **THE WITNESS:** With the counting rules,
 16:30:26 **6** that is correct.
 16:30:27 **7** **Q.** (By Mr. Chachkes) Okay. Well, it doesn't
 16:30:29 **8** matter what the counting rules are. If you want to
 16:30:32 **9** look at -- if you want to just see the morphology,
 16:30:34 **10** you use visual inspection?
 16:30:36 **11** **MR. CIRSCH:** Object to form.
 16:30:36 **12** **THE WITNESS:** The first thing we do is
 16:30:38 **13** look at it and if it has parallel sides and does
 16:30:42 **14** it meet the counting rules where this is an
 16:30:47 **15** elongated particle, that deserves further
 16:30:51 **16** examination.
 16:30:51 **17** **Q.** (By Mr. Chachkes) Can you tell me where
 16:30:53 **18** in ISO 22262 it provides -- directs you to look at
 16:31:01 **19** morphology under TEM?
 16:31:03 **20** **A.** I did. I gave you the ISO standard for
 16:31:06 **21** TEM and indirect prep, and in order to determine what
 16:31:11 **22** your weight percent is, you have to determine if it
 16:31:14 **23** is parallel sides, greater than .5 micrometers in
 16:31:17 **24** length, and so on and so forth.
 16:31:19 **25** Not all methods replicate previous
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 16:31:22 **1** methods. ISO 22262-2 does not put the entire
 16:31:28 **2** counting protocol in there. It directs you to the
 16:31:30 **3** TEM method where you have all these methodology to do
 16:31:36 **4** that.
 16:31:36 **5** **Q.** Okay. So it's not, per se, in 22262, but
 16:31:40 **6** you're saying there's a reference to another ISO
 16:31:44 **7** standard which you say requires visual inspection
 16:31:49 **8** under TEM to determine morphology?
 16:31:52 **9** **MR. CIRSCH:** Object to form.
 16:31:53 **10** **THE WITNESS:** Well, per se it doesn't
 16:31:55 **11** replicate the entire procedure. That's how
 16:31:57 **12** these standards work.
 16:31:59 **13** Once it has a document, in this case,
 16:32:03 **14** another ISO document that lays out all the
 16:32:06 **15** procedures and practices for how to identify
 16:32:09 **16** regulated asbestos, it just goes back to that.
 16:32:13 **17** **Q.** (By Mr. Chachkes) So --
 16:32:14 **18** **A.** ASTM is the same way, and the definition
 16:32:17 **19** of asbestos fibers in ASTM has another document that
 16:32:20 **20** tells you all the different definitions. One builds
 16:32:25 **21** on the other.
 16:32:26 **22** **Q.** Okay. Just looking at 22262, there is a
 16:32:28 **23** section in there under part 1 that is labeled
 16:32:33 **24** Morphology; right?
 16:32:47 **25** Exhibit 4 is the one that's part 1?
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16:32:49 **1** **A.** Oh, part 1, I'm sorry.
 16:32:51 **2** **Q.** Yeah. I'll just direct your attention to
 16:33:05 **3** 7.2. -- on page 22.
 16:33:22 **4** So there's a section on page 22 which has
 16:33:26 **5** the heading Morphology; correct?
 16:33:28 **6** **A.** That is correct. 7.2.3.7.1. I'm
 16:33:32 **7** surprised you didn't know that.
 16:33:34 **8** **Q.** I did, actually.
 16:33:36 **9** And the only heading, as far as you know,
 16:33:41 **10** in the ISO 22262 parts that actually says morphology
 16:33:47 **11** is this one? Or do you not know? I don't want to
 16:33:51 **12** spend all day on that one.
 16:33:52 **13** **MR. CIRSCH:** Form.
 16:33:53 **14** **THE WITNESS:** Well, this is a PLM
 16:33:54 **15** analysis. This is not TEM analysis. And ISO
 16:33:56 **16** has their PLM analysis setup, and these are the
 16:34:01 **17** counting rules of what you do when you're
 16:34:03 **18** analyzing under a polarized light microscope
 16:34:05 **19** versus a transmission electron microscope.
 16:34:07 **20** **Q.** (By Mr. Chachkes) Did you use PLM to
 16:34:12 **21** identify the morphology of the fibers you found in
 16:34:15 **22** the MDL?
 16:34:16 **23** **MR. CIRSCH:** Object to form.
 16:34:19 **24** **THE WITNESS:** Well, that's worded -- and I
 16:34:20 **25** apologize. That's worded poorly.
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 16:34:22 **1** For our ISO 22262-1 PLM analysis, yes. We
 16:34:28 **2** went through, and each of these regulated
 16:34:32 **3** asbestos fibers that we have in there in
 16:34:34 **4** pictures follow this morphology.
 16:34:37 **5** **Q.** (By Mr. Chachkes) Okay. In your reports
 16:34:43 **6** you write on page 12, Amphibole fibers or bundles
 16:34:49 **7** with substantially parallel sides and an aspect ratio
 16:34:53 **8** of 5-to-1 or greater and at least half a micrometer
 16:34:56 **9** in length were counted as regulated asbestos fibers
 16:35:00 **10** and bundles per the standard TEM counting rules
 16:35:03 **11** described by -- and then you cite six methods. Are
 16:35:07 **12** you with me so far?
 16:35:08 **13** **A.** I am.
 16:35:08 **14** **Q.** Which is the method you actually use?
 16:35:12 **15** **A.** Well, can't really point to any one method
 16:35:15 **16** because they all have the same counting rules.
 16:35:17 **17** **Q.** Okay.
 16:35:27 **18** **A.** What page was that?
 16:35:28 **19** **Q.** I was just talking about page 12 of your
 16:35:31 **20** January 15.
 16:35:32 **21** **A.** I think it states that.
 16:35:35 **22** This is for, again, TEM. And every one of
 16:35:45 **23** those TEM methods have those counting rules, so I
 16:35:48 **24** referenced them all.
 16:35:50 **25** **MR. CHACHKES:** So I'm going to mark as the
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16:35:51 **1** next exhibit ISO 13794. We are on Exhibit 21.
16:36:02 **2** (Defendants' Exhibit 21 was marked for
16:36:25 **3** identification.)
16:36:25 **4** **Q.** (By Mr. Chachkes) So we spoke a little
16:36:26 **5** bit before about what's been marked as Exhibit 21;
6 right?
16:36:31 **7** **A.** Yes, sir, we have.
16:36:32 **8** **Q.** Okay. And going to the seventh page in
16:36:41 **9** section 1, Scope. Section -- we're here.
16:36:55 **10** **A.** What page? 7? Did you say 7?
16:36:59 **11** **Q.** Actually, strike that.
16:37:00 **12** I'm sorry. So it was the seventh page of
16:37:05 **13** the PDF, so let's strike that and start again.
16:37:09 **14** Going to what's numbered in the exhibit as
16:37:11 **15** page 1, going to the heading 1, this is Scope; right?
16:37:17 **16** It's the scope of the ISO standard?
16:37:19 **17** **A.** Correct.
16:37:20 **18** **Q.** Okay. Subsection 1.1, which is substance
16:37:24 **19** determined; do you see that?
16:37:25 **20** **A.** I do.
16:37:26 **21** **Q.** And then you see at the last sentence, The
16:37:30 **22** method cannot discriminate between individual fibers
16:37:33 **23** of asbestos and nonasbestos analogs of the same
16:37:36 **24** amphibole mineral.
16:37:36 **25** Do you see that?
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16:37:37 **1** **A.** I do.
16:37:37 **2** **Q.** Do you agree with ISO 13794 that this
16:37:43 **3** method cannot discriminate between individual fibers
16:37:46 **4** of the asbestos and nonasbestos analogs of the same
16:37:50 **5** amphibole material?
16:37:50 **6** **A.** Yes and no. If you're analyzing samples
16:37:56 **7** over and over from the same source and you're seeing
16:38:01 **8** both what people will clearly say is asbestiform
16:38:08 **9** bundles and you have some individual fibers in there,
16:38:11 **10** in my opinion you can discriminate against that.
16:38:12 **11** If I was looking at one fiber and I didn't
16:38:15 **12** have any information about it and hadn't analyzed
16:38:18 **13** sample after sample, I would say that one fiber, it's
16:38:24 **14** asbestos, it's asbestiform because it's formed like
16:38:28 **15** asbestos, but, no, it does not meet the geological
16:38:31 **16** definition for asbestos, high tensile strength,
16:38:36 **17** flexible, and so on and so forth.
16:38:39 **18** But to me, asbestiform means that it is
16:38:42 **19** fibrous like asbestos; I would call it asbestiform.
16:38:45 **20** **Q.** So it's your understanding when -- in this
16:38:49 **21** exhibit, in this ISO standard, when it says it can't
16:38:52 **22** discriminate between asbestos and nonasbestos
16:38:54 **23** analogs, it's referring to geological definitions and
16:39:00 **24** not regulatory definitions; is that your testimony?
16:39:02 **25** **MR. CIRSCH:** Object to form.
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16:39:03 **1** **THE WITNESS:** Well, it is regulatory. If
16:39:05 **2** it -- even though it cannot discriminate, you
16:39:07 **3** have to count it, and it is a regulated asbestos
16:39:10 **4** fiber if you decide it's asbestiform or not. It
16:39:14 **5** does not allow you to discriminate between the
16:39:16 **6** two as long as it meets the counting rules. It
16:39:18 **7** is regulated.
8 **Q.** (By Mr. Chachkes) Okay.
16:39:19 **9** **A.** Now, we can argue over back and forth if
16:39:21 **10** it is asbestiform or not. But make no mistake, it is
16:39:24 **11** a regulated asbestos fiber if it meets the counting
16:39:27 **12** rules.
16:39:28 **13** **Q.** Okay. So you're saying that something can
16:39:31 **14** meet the counting rules, be regulated, but it might
16:39:34 **15** be the non -- you might be counting nonasbestos
16:39:37 **16** analogs?
16:39:38 **17** **MR. CIRSCH:** Object to form.
16:39:39 **18** **THE WITNESS:** It's not nonasbestos.
16:39:42 **19** It's --
16:39:42 **20** **Q.** (By Mr. Chachkes) I'm using the phrase
16:39:44 **21** in --
16:39:44 **22** **A.** It is not nonasbestos. If it meets all
16:39:46 **23** the counting rules, it's a regulated asbestos fiber.
16:39:49 **24** That's my position on that.
16:39:50 **25** **Q.** Okay. In this last sentence of 1.1, it
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16:39:55 **1** makes a distinction between asbestos and nonasbestos
16:39:57 **2** analogs; do you see that?
16:39:58 **3** **A.** I see that.
16:39:59 **4** **Q.** That's black and white; right?
16:40:00 **5** **MR. CIRSCH:** Object.
16:40:01 **6** **THE WITNESS:** That's what it states.
16:40:02 **7** **Q.** (By Mr. Chachkes) Okay. So tell me what
16:40:04 **8** asbestos versus nonasbestos analogs mean in
16:40:09 **9** ISO 13794.
16:40:09 **10** **MR. CIRSCH:** Object to form.
16:40:10 **11** **THE WITNESS:** They don't really define it
16:40:12 **12** other than to say it may not.
16:40:13 **13** In my opinion, if it is fibrous,
16:40:16 **14** asbestiform, fibrous like asbestos-form, it is
16:40:20 **15** asbestiform.
16:40:21 **16** **Q.** (By Mr. Chachkes) Yeah, but what I want
16:40:23 **17** is can you make any -- reading -- looking at that
16:40:27 **18** sentence, there's a clear distinction between
16:40:30 **19** asbestos and nonasbestos analogs. What's the
16:40:32 **20** difference?
16:40:33 **21** It doesn't matter what you think. What is
16:40:34 **22** the ISO -- what distinction are they making? Or you
16:40:37 **23** just can't say?
16:40:38 **24** **MR. CIRSCH:** Object to form.
16:40:38 **25** **THE WITNESS:** It's not that they don't
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16:40:40 **1** say. They don't tell you how to determine
16:40:41 **2** between, quote, this nonasbestos -- this
16:40:44 **3** nonasbestiform versus asbestiform. There is no
16:40:50 **4** method for doing that.
16:40:52 **5** **Q.** (By Mr. Chachkes) Okay. Is it your
16:40:53 **6** opinion because they don't give a definition of the
16:40:56 **7** distinction, they really didn't mean that
16:40:59 **8** distinction?
16:40:59 **9** **A.** I can't say what the --
16:41:01 **10** MR. CIRSCH: Object to form.
16:41:02 **11** THE WITNESS: -- what Eric Chatfield had
16:41:05 **12** in mind when he said that.
13 **Q.** (By Mr. Chachkes) Okay.
16:41:07 **14** **A.** But in the protocol, what I look at as a
16:41:09 **15** scientist, and we look at these protocols, what does
16:41:13 **16** it say to make the determination between the two? It
16:41:17 **17** doesn't give you any information. Same thing with
16:41:19 **18** the whole asbestiform, high tensile strength,
16:41:23 **19** et cetera.
16:41:24 **20** But we have the ability now, we have
16:41:26 **21** analyzed so many samples and have analyzed so many
16:41:30 **22** regulated asbestos fibers and bundles that we have
16:41:34 **23** enough information if that is really at issue that
16:41:37 **24** these are all asbestiform.
16:41:40 **25** But no matter if you want to argue that
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16:41:42 **1** it's not, it is, for single fibers, it's all
16:41:45 **2** regulated asbestos fibers per these protocols.
16:41:47 **3** **Q.** Yeah, you've already said that a number of
16:41:49 **4** times, and I'm not going to take issue with your
16:41:51 **5** opinion in that regard.
16:41:52 **6** What I want to know is the phrase
16:41:56 **7** nonasbestos analog appears in ISO 13794. What does
16:42:00 **8** it mean? And if you have no idea, that's fine.
16:42:03 **9** MR. CIRSCH: Object to form.
16:42:04 **10** THE WITNESS: It's not that I don't have
16:42:05 **11** any idea. I have an opinion about it. And it's
16:42:08 **12** not my opinion that they're regulated asbestos
16:42:10 **13** or not and you count them. The protocol tells
16:42:13 **14** you to count them, that this is a regulated
16:42:16 **15** asbestos fiber, you will record it on a count
16:42:19 **16** sheet. All these protocols do that.
16:42:21 **17** It doesn't give you the information to
16:42:22 **18** make the determination. Just like it doesn't
16:42:24 **19** give you the information to determine if you
16:42:26 **20** have high tensile strength. It does not give
16:42:30 **21** you the information to make the determination
16:42:31 **22** what a population is. It does not give you the
16:42:34 **23** information to make a determination if it's
16:42:37 **24** flexible or not.
16:42:37 **25** **Q.** (By Mr. Chachkes) Putting aside what gets
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16:42:39 **1** counted and what doesn't get counted, what does
16:42:41 **2** nonasbestos analogs in this sentence mean? What does
16:42:45 **3** that phrase mean?
16:42:46 **4** MR. CIRSCH: Object to form. And this is
16:42:48 **5** the last time he's going to answer this
16:42:51 **6** question.
16:42:51 **7** THE WITNESS: I don't know what they're
16:42:52 **8** saying what it means because they don't give you
16:42:54 **9** any information to make that determination.
16:42:56 **10** I look at just simply what does
16:42:58 **11** asbestiform mean. It means formed like
16:43:01 **12** asbestos.
16:43:02 **13** So you may not like my opinion, but that's
16:43:06 **14** my opinion.
16:43:06 **15** **Q.** (By Mr. Chachkes) You know that under 2.6
16:43:13 **16** on page 2 it says, Asbestiform is a specific type of
16:43:17 **17** mineral fibrosity in which fibers and fibrils possess
16:43:21 **18** high tensile strength and flexibility.
16:43:24 **19** You see that; right?
16:43:25 **20** **A.** What is it? 2.6?
16:43:27 **21** **Q.** 2.6. Do you see that?
16:43:27 **22** **A.** Yes, I do.
16:43:27 **23** **Q.** Would it be reasonable to conclude
16:43:29 **24** nonasbestiform is something that is an analog to
16:43:33 **25** something that is asbestiform under 2.6?
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16:43:35 **1** **A.** No.
16:43:35 **2** MR. CIRSCH: Object to form.
16:43:36 **3** THE WITNESS: The protocol doesn't tell
16:43:38 **4** you what any of that means. High tensile
16:43:41 **5** strength. What tensile strength? How do you
16:43:45 **6** measure that?
16:43:46 **7** That's just a general geological
16:43:48 **8** definition for somebody who may be interested in
16:43:51 **9** digging asbestos out of the ground, and is it
16:43:53 **10** going to be fibrous enough to be profitable?
16:43:56 **11** That has no meaning in the protocol.
16:43:57 **12** Otherwise, in a protocol for how to do the
16:44:00 **13** analysis, how do you determine it's high tensile
16:44:03 **14** strength? What does high tensile strength mean?
16:44:06 **15** Is it 10,000 high, is it 2,000 high has no
16:44:11 **16** bearing on the actual analysis in the protocol.
16:44:13 **17** **Q.** (By Mr. Chachkes) Okay.
16:44:16 **18** **A.** This is nothing more than a standard
16:44:20 **19** geological definition for a high fibrous mine of
16:44:20 **20** asbestos.
16:44:20 **21** **Q.** In your opinion, is the sentence that this
16:44:24 **22** method -- this ISO method can't discriminate between
16:44:28 **23** individual fibers of asbestos and nonasbestiform
16:44:31 **24** analogs, is it related to those definitions in 2.6,
16:44:35 **25** 2.7?
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16:44:36 **1** A. No, because those definitions aren't
16:44:39 **2** defined anywhere in the protocol for the analysis.
16:44:42 **3** Q. Okay. And so when ISO uses the word
16:44:45 **4** asbestos on page 1, it's not related to how ISO
16:44:49 **5** defines asbestos on page 2?
16:44:52 **6** MR. CIRSCH: Object to form.
16:44:53 **7** THE WITNESS: On page 2, if you go to
16:45:02 **8** page 3, they define what a fiber is.
16:45:08 **9** Is it page 3 or page 4? Give me a second.
16:45:17 **10** ISO defines a fiber -- for the purpose of
16:45:20 **11** this International Standard, a fiber is defined
16:45:23 **12** to have an aspect ratio equal or greater than
16:45:26 **13** 5-to-1 and a minimum length of 5.0.
16:45:29 **14** Fiber bundle, structure composed of
16:45:31 **15** parallel smaller diameter fibers attached to
16:45:35 **16** longer lengths.
16:45:36 **17** Fibrous structure.
16:45:38 **18** And then you go to, okay, once I've
16:45:40 **19** defined it as a fiber, in the method tells you
16:45:43 **20** to -- how to identify it if it is asbestos fiber
16:45:46 **21** or not.
16:45:48 **22** Nothing else in there tells you anything
16:45:49 **23** about how to determine tensile strength, how to
16:45:52 **24** determine flexibility, how to determine the
16:45:56 **25** pop -- this one doesn't say population, but some
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16:45:59 **1** do.
16:45:59 **2** Q. (By Mr. Chachkes) It's a simple -- very
16:46:01 **3** simple question. Page 1, the word asbestos is used.
16:46:04 **4** On page 2 I see a definition of asbestos. Is it your
16:46:07 **5** testimony that the two are unrelated, or are they
16:46:10 **6** related?
7 MR. CIRSCH: Object to form.
16:46:11 **8** Q. (By Mr. Chachkes) It's a yes or no. Are
16:46:13 **9** they related?
16:46:14 **10** MR. CIRSCH: Object to form.
16:46:14 **11** THE WITNESS: This is not a yes and no
16:46:16 **12** question. You have to take the whole protocol
16:46:18 **13** into consideration to answer this question.
16:46:21 **14** The whole protocol determines what is a
16:46:24 **15** regulated asbestos, and then the asbestiform and
16:46:27 **16** high tensile strength is just a general
16:46:30 **17** definition. That's what it means.
16:46:32 **18** Q. (By Mr. Chachkes) Okay. So if I want to
16:46:36 **19** figure out what nonasbestos analog means in 1.1, I
16:46:41 **20** could not use definitions like 2.6, 2.7, 2.8 to help
16:46:46 **21** me determine that?
16:46:48 **22** MR. CIRSCH: Object to form.
16:46:49 **23** THE WITNESS: Well, those definitions tell
16:46:51 **24** you what is a regulated asbestos fiber. There
16:46:55 **25** is nothing in the protocol that tells you how to
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16:46:58 **1** make the determination other than the counting
16:47:00 **2** rules.
16:47:01 **3** Certainly, if it doesn't have parallel
16:47:04 **4** sides, if it is a piece of a chunk of rock,
16:47:08 **5** yeah, that's nonasbestiform. But when it has
16:47:10 **6** the definition and meets the regulatory fiber
16:47:14 **7** definition for asbestos, it is asbestos.
16:47:17 **8** Q. (By Mr. Chachkes) Okay. But you agree
16:47:19 **9** with the sentence in -- all right. Strike that.
16:47:36 **10** You personally can distinguish between
16:47:40 **11** asbestos and nonasbestos analogs with TEM; is that
16:47:44 **12** correct?
16:47:44 **13** MR. CIRSCH: Object to form.
16:47:45 **14** THE WITNESS: Yes, I can.
16:47:49 **15** Q. (By Mr. Chachkes) Using the ISO 13794
16:47:54 **16** method; correct?
16:47:56 **17** A. Yes, I can. If it doesn't meet the
16:47:57 **18** counting rules, it doesn't have parallel sides, it
16:48:01 **19** doesn't have the aspect ratio, I don't record that as
16:48:05 **20** an asbestos -- as an asbestos -- regulated asbestos
16:48:09 **21** fiber.
16:48:11 **22** Outside those counting rules, there's
16:48:12 **23** nothing else in there. If it has parallel sides --
16:48:18 **24** and what we're arguing is a small number of fibers.
16:48:22 **25** I think in the MDL we had almost 90-something percent
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16:48:25 **1** bundles.
16:48:25 **2** So then we're dealing with some single
16:48:29 **3** fibers. And because we have this -- and I'll call
16:48:34 **4** it -- since a population is more than one, for these
16:48:37 **5** two mine sources we're dealing with, we have a large
16:48:40 **6** number of asbestiform bundles and a much smaller
16:48:44 **7** number of individual fibers.
16:48:45 **8** Q. Would you agree that there are two types
16:48:47 **9** of tremolite --
16:48:48 **10** MR. CIRSCH: Did you finish your answer,
16:48:49 **11** Dr. Longo?
16:48:49 **12** THE WITNESS: I think so.
16:48:50 **13** Q. (By Mr. Chachkes) Would you agree that
16:48:51 **14** there's two kinds of tremolite: asbestiform and
16:48:54 **15** nonasbestiform?
16:48:55 **16** A. I agree there's tremolite asbestos; and
16:48:57 **17** then there's tremolite asbestos, regulated tremolite
16:49:01 **18** asbestos. Then there is what we don't count as a
16:49:04 **19** regulated asbestos fiber because of various reasons.
16:49:07 **20** Q. Is there such a thing as nonasbestiform
16:49:11 **21** tremolite?
16:49:12 **22** A. There is cleavage fragment type small
16:49:16 **23** particulates of tremolite that we do not count. You
16:49:18 **24** can call it nonasbestiform; you can call it a
16:49:20 **25** cleavage fragment. But I would agree with that.
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16:49:23 **1** Anything below 5-to-1 aspect ratio we don't count.
 16:49:27 **2** And you can call it whatever you like, but it's not a
 16:49:30 **3** regulated asbestos fiber/bundle.
 16:49:32 **4** **Q.** Okay. Do you ever -- do you feel like you
 16:49:39 **5** have the ability to talk about a mineralogical --
 16:49:42 **6** what you called a mineralogical definition of
 16:49:44 **7** asbestos? Or is that outside of your expertise?
 16:49:47 **8** **A.** You mean a geological definition?
 16:49:49 **9** **Q.** Or a geological.
 16:49:50 **10** **A.** Sure.
 16:49:50 **11** **Q.** Okay. Geologically, what's a
 16:49:52 **12** nonasbestiform asbestos?
 16:49:53 **13** **A.** Rocks.
 16:49:56 **14** **Q.** That's it? Everything that's rock is
 16:49:59 **15** nonasbestiform asbestos?
 16:50:01 **16** **MR. CIRSCH:** Object to form.
 16:50:02 **17** **THE WITNESS:** If it doesn't have a fibrous
 16:50:04 **18** habitat, it's nonasbestos.
 16:50:07 **19** **Q.** (By Mr. Chachkes) Okay.
 16:50:08 **20** **A.** Or habit -- excuse me -- not habitat. I
 16:50:10 **21** think that's where animals live. I apologize.
 16:50:12 **22** Strike that.
 16:50:12 **23** If the crystalline habit is not fibrous,
 16:50:17 **24** then it's not something that is mined or used as a
 16:50:22 **25** regulated -- and it's not determined to be a
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16:50:24 **1** regulated asbestos.
 16:50:24 **2** **Q.** All right. You remember the original
 16:50:26 **3** question was not about regulations; it was about the
 16:50:28 **4** geological definitions; right?
 16:50:31 **5** **MR. CIRSCH:** Object to form.
 16:50:32 **6** **THE WITNESS:** I believe I have enough
 16:50:33 **7** expertise to discuss the geological definitions,
 16:50:36 **8** to discuss this high tensile strength, to
 16:50:40 **9** discuss what the value of a mine is that has
 16:50:42 **10** very matted, very fibrous asbestos, like
 16:50:45 **11** chrysotile, versus what a ton of the same
 16:50:49 **12** asbestos where it's 7M and it's almost two
 16:50:54 **13** orders of magnitude difference. It's about the
 16:50:56 **14** viability of a particular asbestos mine.
 16:50:58 **15** **Q.** (By Mr. Chachkes) Okay. Tremolite alone
 16:51:02 **16** does not mean it's asbestos; would you agree with
 16:51:04 **17** that statement --
 16:51:09 **18** **MS. O'DELL:** Object to form.
 16:51:11 **19** **Q.** (By Mr. Chachkes) -- saying something's
 16:51:14 **20** tremolite?
 16:51:14 **21** **MS. O'DELL:** Object to form.
 16:51:10 **22** **THE WITNESS:** It depends on what you're
 16:51:11 **23** talking about. If you're talking about, say,
 16:51:14 **24** XRD 20, 30, 40 years ago, said tremolite in a
 16:51:20 **25** particular mine and over time that particular
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16:51:24 **1** mine has shown that the tremolite in there is
 16:51:27 **2** primarily asbestiform, then, yeah, you can take
 16:51:30 **3** all the data specifically and say, well, this
 16:51:34 **4** whole data with XRD shows that there was
 16:51:37 **5** tremolite present, but no, it doesn't -- XRD
 16:51:39 **6** does not give you fibrous. But after a while,
 16:51:43 **7** if you analyze enough samples out of the mine
 16:51:45 **8** and you're seeing regulated asbestos fibers and
 16:51:47 **9** bundles, then more likely than not those initial
 16:51:51 **10** XRD analysis was asbestos.
 16:51:53 **11** **Q.** (By Mr. Chachkes) Without referring to
 16:51:55 **12** the -- so you understand that I can look at a tree in
 16:52:00 **13** many different ways. I can look at it through a
 16:52:02 **14** microscope, I can look at it through a telescope, I
 16:52:05 **15** can look at it with my own eyes. So far you're with
 16:52:08 **16** me?
 16:52:08 **17** **A.** So far.
 16:52:09 **18** **Q.** Okay. Do you understand that the way I
 16:52:10 **19** look at it doesn't change the definition of whether
 16:52:12 **20** it's a tree or not; right?
 16:52:14 **21** **MR. CIRSCH:** Object to form.
 16:52:15 **22** **Q.** (By Mr. Chachkes) Is that true or not?
 16:52:16 **23** **MR. CIRSCH:** Object to form.
 16:52:17 **24** **Q.** (By Mr. Chachkes) I'm only asking about
 16:52:20 **25** the tree now.
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16:52:21 **1** **A.** I don't think you would be able to tell by
 16:52:24 **2** a telescope. But if you're looking at a tree, it's a
 16:52:27 **3** tree.
 16:52:27 **4** **Q.** Right. It doesn't matter how I'm looking
 16:52:29 **5** at it. A tree is a tree; is that correct?
 16:52:32 **6** **MS. O'DELL:** Object to form.
 16:52:33 **7** **THE WITNESS:** Your tree analogy for a
 16:52:36 **8** tree, that's correct.
 16:52:36 **9** **Q.** (By Mr. Chachkes) Okay. So are you
 16:52:38 **10** saying it's different for asbestos? I call something
 16:52:41 **11** asbestos or nonasbestiform depending on how I look at
 16:52:44 **12** it?
 16:52:44 **13** **MR. CIRSCH:** Object to form.
 16:52:45 **14** **THE WITNESS:** No. It's sort of a
 16:52:46 **15** misleading kind of analogy.
 16:52:48 **16** What I'm talking about is back 50 years
 16:52:53 **17** ago, when you're looking at a tree, you said it
 16:52:56 **18** was a tree. Somebody asked later that -- people
 16:52:59 **19** went in who actually knew what trees were and
 16:53:02 **20** said, well, 95 percent of these are oak trees 40
 16:53:05 **21** years later. Then you go, well, what was I
 16:53:07 **22** actually looking at 50 years ago for these same
 16:53:10 **23** trees? Well, oak trees.
 16:53:11 **24** **Q.** (By Mr. Chachkes) I'm just talking
 16:53:13 **25** about -- okay. Stick with me here. Don't talk about
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16:53:16 **1** history. Don't talk about the way I'm looking at
16:53:18 **2** things. Don't talk about regulations.
16:53:20 **3** Just strictly objectively, what is
16:53:24 **4** nonasbestiform versus asbestiform?
16:53:27 **5** MR. CIRSCH: Object to form.
16:53:28 **6** **Q.** (By Mr. Chachkes) And if you can do that
16:53:30 **7** without telling me -- without -- can you do that
16:53:33 **8** without talking about the device I'm looking at it
16:53:34 **9** with? Is that possible?
16:53:37 **10** MR. CIRSCH: Object to form.
16:53:38 **11** THE WITNESS: No --
16:53:40 **12** **Q.** (By Mr. Chachkes) Okay. What --
13 **A.** -- because --
16:53:43 **14** MR. CIRSCH: Let him answer.
16:53:43 **15** THE WITNESS: What we're doing here is
16:53:44 **16** we're using sophisticated devices to make the
16:53:49 **17** determination if these are regulated asbestos or
16:53:50 **18** not.
16:53:50 **19** I understand that maybe for whatever
16:53:52 **20** reason you want to just pick little pieces here
16:53:55 **21** and there, but this is not what we do with this
16:53:56 **22** analysis.
16:53:57 **23** We're using standard peer-reviewed
16:54:02 **24** published protocols for the determination of
16:54:05 **25** regulated asbestos fibers and bundles.
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16:54:08 **1** **Q.** (By Mr. Chachkes) Tremolite -- just
16:54:10 **2** saying something is tremolite does not mean it's
16:54:12 **3** asbestos in certain contexts; is that true?
16:54:15 **4** MS. O'DELL: Object to the form.
16:54:16 **5** THE WITNESS: Again, when we do these
16:54:18 **6** analyses, anything that doesn't meet the
16:54:20 **7** regulated asbestos counting rules we do not
16:54:23 **8** count. You can call it whatever you like, but
16:54:25 **9** it doesn't meet the counting rules.
16:54:27 **10** Everything that we have published and
16:54:29 **11** provided here is regulated asbestos fibers and
16:54:32 **12** bundles.
16:54:33 **13** **Q.** (By Mr. Chachkes) Okay. What is a
16:54:34 **14** cleavage fragment?
16:54:35 **15** **A.** Cleavage fragment, typically for
16:54:38 **16** tremolite, is particulates that have an aspect ratio
16:54:41 **17** of somewhere between 1-to-1 to 1-to-2, but they will
16:54:44 **18** have the same chemistry and the same crystalline
16:54:47 **19** pattern.
16:54:48 **20** **Q.** Do you agree with ISO 13794 when it
16:54:53 **21** defines cleavage fragment as a fragment of a crystal
16:54:57 **22** that is bounded by cleavage faces?
16:55:00 **23** **A.** Yes.
16:55:00 **24** **Q.** Would you agree with this statement:
16:55:03 **25** Crushing of nonasbestiform amphiboles can -- I'm
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16:55:09 **1** sorry. Strike that. Start again.
16:55:19 **2** Do you agree with this statement:
16:55:21 **3** Crushing of nonasbestiform amphibole can lead to
16:55:24 **4** elongate fragments that conform to the definition of
16:55:27 **5** a fiber?
16:55:30 **6** **A.** I've not seen those with these counting
16:55:35 **7** rules. Certainly we have seen lots of these
16:55:38 **8** fragments that are below 5-to-1 aspect ratio.
16:55:45 **9** I'm not ruling it out, but we typically
16:55:47 **10** don't see that. When we did a size distribution
16:55:51 **11** of --
16:55:52 **12** **Q.** I'm not talking about what you can't
16:55:54 **13** see --
16:55:55 **14** MR. CIRSCH: Hold on.
16:55:56 **15** THE WITNESS: Hold on, hold on.
16:55:57 **16** We don't typically see that but your
16:55:59 **17** hypothetical, if it does have parallel sides, if
16:56:02 **18** it does meet all the definitions of the counting
16:56:04 **19** rules, you can call it what you like, but it's
16:56:07 **20** regulated asbestos per the standard counting
16:56:10 **21** rules for every one of these TEM methods that I
16:56:13 **22** have referenced in my report.
16:56:15 **23** **Q.** (By Mr. Chachkes) I kind of lost track
16:56:17 **24** there.
16:56:17 **25** Do you agree with the statement: Crushing
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16:56:20 **1** of asbestiform amphibole can lead to elongate
16:56:23 **2** fragments that conform to the definition of a fiber?
16:56:26 **3** MR. CIRSCH: Object to form.
16:56:27 **4** THE WITNESS: I've not seen one, so maybe
16:56:29 **5** somebody else has.
16:56:30 **6** **Q.** (By Mr. Chachkes) Okay. Do you agree
16:56:32 **7** with the statement: Crushed nonasbestiform
16:56:34 **8** amphiboles rarely have aspect ratios exceeding
16:56:37 **9** 30-to-1?
16:56:38 **10** **A.** I've not seen crushed -- I'm sorry, would
16:56:42 **11** you repeat that?
16:56:43 **12** **Q.** Crushed nonasbestiform amphiboles rarely
16:56:46 **13** have aspect ratios exceeding 30-to-1.
16:56:49 **14** **A.** I've rarely seen anything greater than
16:56:53 **15** 1-to-1, 2-to-1, 3-to-1.
16:57:00 **16** **Q.** The question is do you agree with that
16:57:02 **17** statement, yes or no?
16:57:03 **18** **A.** That's too broad. I mean, I would say
16:57:06 **19** crushed particles of nonregulated asbestos fibers and
16:57:13 **20** bundles, the aspect ratio very rarely exceeds 3-to-1,
16:57:18 **21** 4-to-1.
16:57:19 **22** **Q.** Okay. ISO -- strike that.
16:57:24 **23** What is the average width of a tremolite
16:57:28 **24** fiber under the TEM?
16:57:31 **25** MR. CIRSCH: Object to form.
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16:57:31 **1** THE WITNESS: An individual fiber
16:57:32 **2** typically can run anywhere from about .2 to .4,
16:57:39 **3** seen some as high as .5 for an individual fiber.
16:57:42 **4** **Q.** (By Mr. Chachkes) Okay. Do you have a
16:57:44 **5** peer-reviewed reference to support that?
16:57:50 **6** MS. O'DELL: Your original question was
16:57:52 **7** what he had seen.
16:57:54 **8** MR. CHACHKES: Actually, no. The original
16:57:55 **9** question was what is the average width.
16:57:56 **10** THE WITNESS: I think if you look at Wylie
16:57:58 **11** and others, they say that single tremolite or
16:58:01 **12** single amphibole fibers very rarely exceed .5,
16:58:04 **13** .6. So there's a number of references out
16:58:07 **14** there. I can't remember all the citations, but
16:58:09 **15** there's a number of references on that.
16:58:11 **16** **Q.** (By Mr. Chachkes) The question is do you
16:58:12 **17** have a peer-reviewed reference to cite to to support
16:58:15 **18** your testimony that the average width of a tremolite
16:58:18 **19** fiber is usually between .2 and .4?
16:58:21 **20** MR. CIRSCH: Object to form.
16:58:22 **21** THE WITNESS: I've seen as high as .5.
16:58:25 **22** There's a range. And it's been published
16:58:28 **23** before, but no, I don't have the citation on me.
16:58:30 **24** **Q.** (By Mr. Chachkes) What's the average
16:58:31 **25** width of an anthophyllite fiber under TEM?
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16:58:37 **1** MR. CIRSCH: Object to form.
16:58:37 **2** THE WITNESS: Typically in the same range
16:58:40 **3** as tremolite.
16:58:41 **4** **Q.** (By Mr. Chachkes) And do you have a
16:58:44 **5** citation for a peer-reviewed paper to support that?
16:58:47 **6** **A.** Not that I can rattle off the top of my
16:58:51 **7** head, no, sir.
16:58:52 **8** **Q.** What's the largest width an anthophyllite
16:58:54 **9** particle can have and still be characterized as a
16:58:57 **10** fiber under TEM?
16:59:00 **11** MR. CIRSCH: Object to form.
16:59:01 **12** MS. O'DELL: Would you repeat that,
16:59:03 **13** please?
16:59:03 **14** **Q.** (By Mr. Chachkes) What is the largest
16:59:04 **15** width of an anthophyllite particle -- strike that.
16:59:08 **16** What is the largest width an anthophyllite
16:59:10 **17** particle can have and still be characterized as a
16:59:12 **18** fiber under TEM?
16:59:14 **19** **A.** Whatever width that will exceed equal to
16:59:22 **20** 5-to-1 aspect ratio. So it doesn't have a cutoff on
16:59:26 **21** the width for a single fiber. As long as it
16:59:32 **22** exceeds -- greater than or equal to 5 -- aspect ratio
16:59:35 **23** of 5.
16:59:36 **24** **Q.** So the width doesn't matter; it's the
16:59:38 **25** aspect ratio that matters?
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16:59:40 **1** **A.** Correct.
16:59:40 **2** **Q.** Okay. Do you have a reference,
16:59:43 **3** peer-reviewed reference, to cite for that?
16:59:45 **4** **A.** Every one of the counting protocols do not
16:59:48 **5** have a maximum on the width. They all have the same
16:59:52 **6** counting protocol for the aspect ratios for the
16:59:56 **7** length, for greater than .5 micrometers. So they're
17:00:00 **8** all the same.
17:00:01 **9** I'm not aware of any of these
17:00:02 **10** peer-reviewed publications, protocols, stating that
17:00:08 **11** there is a maximum width.
17:00:11 **12** MR. CIRSCH: We've been going about an
17:00:12 **13** hour, so when you get to the next spot, can we
17:00:15 **14** take a break?
17:00:16 **15** MR. CHACHKES: Sure. Give me maybe like 5
17:00:17 **16** more minutes; is that okay?
17:00:18 **17** MR. CIRSCH: It's up to the doctor.
17:00:18 **18** THE WITNESS: I would like to take a break
17:00:20 **19** now.
17:00:20 **20** **Q.** (By Mr. Chachkes) Okay. Can I just
17:00:22 **21** ask -- let me ask one more --
17:00:22 **22** **A.** Okay.
17:00:24 **23** **Q.** -- because it's just basically the same
17:00:25 **24** one, tremolite.
17:00:26 **25** What is the largest width a tremolite
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17:00:28 **1** particle can have and still be characterized as a
17:00:30 **2** fiber under TEM? Is it same answer?
17:00:32 **3** **A.** It's the same answer. Now, we don't see
17:00:34 **4** any single fibers with widths that exceed or that are
17:00:39 **5** any width. I mean, it's in that range that I've
17:00:42 **6** talked about.
17:00:43 **7** Typically, when it gets larger, it is a
17:00:45 **8** bundle, and you can have -- we've had bundles as wide
17:00:49 **9** as 1 to 2 micrometers in diameter, but that's made up
17:00:53 **10** of -- something that big is made up tens to hundreds
17:00:57 **11** of individual fibers.
17:00:57 **12** **Q.** But hypothetically, you see a tremolite
17:00:58 **13** particle with a width of 1, you would still
17:01:01 **14** characterize that as a fiber if the aspect ratio was
17:01:06 **15** in the right range?
17:01:08 **16** MR. CIRSCH: Object to form.
17:01:09 **17** THE WITNESS: Hypothetically, because I
17:01:11 **18** don't believe we've ever seen one in any of
17:01:13 **19** these protocol -- any of these analyses. But if
17:01:14 **20** it has -- if it meets the peer-reviewed counting
17:01:18 **21** rules for regulated asbestos, yes, it would be
17:01:21 **22** counted, hypothetically.
17:01:23 **23** MR. CHACHKES: Okay. Let's take a break.
17:01:25 **24** (Recess from 5:01 p.m. to 5:20 p.m.)
17:21:00 **25** **Q.** (By Mr. Chachkes) Going back to
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17:21:07 **1** Exhibit 21, which is ISO 13794, now, 2.7, that's a
17:21:16 **2** definition of asbestos; correct?
17:21:20 **3** **A.** 2.7?
17:21:21 **4** **Q.** Yes. On page 2.
17:21:23 **5** **A.** Oh.
17:21:42 **6** **Q.** Is that a definition of asbestos?
17:21:45 **7** **A.** That's their definition, yes, sir.
17:21:47 **8** **Q.** Okay. Now, I've heard you use the phrase,
17:21:50 **9** the distinction, geological and regulatory
17:21:54 **10** definitions as if they were different. Which one is
17:21:57 **11** this?
17:21:58 **12** **A.** It's just a general definition.
17:22:04 **13** **Q.** Okay. It's not a geological definition,
17:22:07 **14** it's not a regulatory definition, it's just a
17:22:09 **15** definition?
17:22:10 **16** **A.** Let's see. Crystallized in asbestiform
17:22:14 **17** habit. That's for both. Long, thin, flexible,
17:22:18 **18** strong fibers when crushed or processed. They don't
17:22:20 **19** define what strong is, but that's just a general
17:22:23 **20** definition.
17:22:23 **21** **Q.** Okay. Is it your opinion that there's no
17:22:28 **22** such thing as a cleavage fragment for something that
17:22:31 **23** has a greater than 5-to-1 aspect ratio?
17:22:33 **24** **A.** I never said that.
17:22:34 **25** **Q.** Okay. Is there such a thing as a cleavage
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17:22:40 **1** fragment for something that has a greater than 5-to-1
17:22:41 **2** aspect ratio?
17:22:41 **3** **A.** With parallel sides we've not seen one,
17:22:44 **4** but I guess hypothetically it's possible.
17:22:46 **5** **Q.** Okay. Is there anything in the published
17:22:55 **6** literature that you've seen that suggests that there
17:22:58 **7** are cleavage fragments with a greater than 5-to-1
17:23:02 **8** aspect ratio?
17:23:02 **9** **A.** There's been a number of published
17:23:05 **10** articles that state things like that, yes.
17:23:08 **11** **Q.** Are there any published articles that
17:23:11 **12** state that there are cleavage fragments that have
17:23:13 **13** greater than 3-to-1 aspect ratio?
17:23:15 **14** **A.** Yes, there is publications that state
17:23:19 **15** that.
17:23:19 **16** **Q.** Okay. If I pulled a hand-sized amphibole
17:23:27 **17** rock out that had a greater than 5-to-1 aspect ratio,
17:23:32 **18** would you call that a fiber?
17:23:34 **19** **MR. CIRSCH:** Object to form.
17:23:34 **20** **THE WITNESS:** If it is a rock and doesn't
17:23:36 **21** have any parallel sides that define a fiber, no.
17:23:40 **22** **Q.** (By Mr. Chachkes) Does MAS have a
17:23:42 **23** protocol in place for describing the dimensions of
17:23:44 **24** fibers under the visual inspection under TEM?
17:23:47 **25** **A.** Yes.
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17:23:48 **1** **Q.** Is it written down?
17:23:51 **2** **A.** Yes.
17:23:51 **3** **Q.** Have you produced it?
17:23:53 **4** **A.** No.
17:23:54 **5** **MR. CHACHKES:** Okay. We'd like that
17:23:56 **6** produced.
17:23:56 **7** **MS. O'DELL:** We'll consider it.
17:23:57 **8** **Q.** (By Mr. Chachkes) Okay. Does MAS have a
17:23:58 **9** protocol in place for describing the dimensions of
17:24:01 **10** fibers -- sorry.
17:24:10 **11** What do you call that protocol? Is there
17:24:12 **12** a name for it?
17:24:13 **13** **A.** Well, the protocol is the method we have
17:24:16 **14** here. It tells you how to make those measurements.
17:24:18 **15** It has -- the microscopes have calibrated concentric
17:24:24 **16** circles that allow you to make the measurements for
17:24:28 **17** greater than .5 micrometers. It is -- parallel sides
17:24:33 **18** is a visual determination.
17:24:37 **19** **MR. CHACHKES:** Let's look at that. Let's
17:24:39 **20** look at some TEM photomicrographs. Can we mark
17:24:43 **21** this Exhibit 22? Can we just put the sticker
17:24:52 **22** here so it doesn't obstruct anything?
17:24:54 **23** (Defendants' Exhibit 22 was marked for
17:25:15 **24** identification.)
17:25:15 **25** **Q.** (By Mr. Chachkes) All right. Look at
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17:25:16 **1** Exhibit 22. Can you tell me what -- that very top
17:25:22 **2** row of three, is that asbestiform fibers, if you knew
17:25:28 **3** you were looking at an amphibole?
17:25:30 **4** **A.** Top row, this one?
17:25:32 **5** **Q.** Yeah.
17:25:34 **6** **A.** Just looking at the photograph, I would
17:25:38 **7** state that that is a regulated asbestos size --
17:25:41 **8** asbestiform or not for these different photographs.
17:25:48 **9** **Q.** All right.
17:25:52 **10** **A.** Certainly one, I would say two. I'd have
17:25:55 **11** to be looking at that under a TEM to make that
17:25:57 **12** determination if it's asbestiform or not. It
17:26:01 **13** certainly has the aspect ratio; it has parallel
17:26:02 **14** sides. That would be a regulated asbestos, at least
17:26:10 **15** in TEM. It's unclear. This may be -- this may be
17:26:13 **16** optical microscopy.
17:26:17 **17** **Q.** That third one on the very top row, what
17:26:20 **18** could you see under TEM or do under TEM that would
17:26:25 **19** make you say, oh, that's not regulated asbestos,
17:26:26 **20** assuming it's an amphibole?
17:26:28 **21** **A.** Well I would have to be looking at it
17:26:32 **22** under the TEM so -- you're looking at an optical
17:26:33 **23** microscopy picture.
17:26:36 **24** **Q.** But what is it you would be -- what is it
17:26:36 **25** that you could see under a TEM that would make you
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17:26:38 **1** think that's not -- because the aspect ratio
17:26:40 **2** obviously is greater than 5-to-1; right?
17:26:41 **3** **A.** Well, I would take a look at it and see
17:26:43 **4** parallel sides, is that multiple fibers. I don't
17:26:48 **5** know what magnification this is at.
17:26:50 **6** So again, I would prefer to be looking at
17:26:51 **7** something under a TEM than just play
17:26:54 **8** guess-what-this-is.
17:26:54 **9** **Q.** Okay. So it's possible what you're
17:26:56 **10** looking at there which has an aspect ratio of -- it's
17:27:00 **11** greater than 5-to-1; right?
17:27:01 **12** **A.** That's correct.
17:27:02 **13** **Q.** Okay. It's possible that that's not --
17:27:04 **14** that's nonasbestiform if it doesn't have parallel
17:27:08 **15** sides; is that true?
17:27:09 **16** **A.** Again, this is an optical microscopy
17:27:11 **17** picture. So unless I was looking at this under the
17:27:14 **18** TEM, but certainly has parallel sides. I don't know
17:27:17 **19** the width. I can't really make out the micron bar, I
17:27:21 **20** don't know the magnification.
17:27:22 **21** So you'll have to get some other expert to
17:27:25 **22** take a look at it, if he's willing to opine what that
17:27:29 **23** is versus the counting rules in the TEM.
17:27:32 **24** **Q.** In the second row, assuming that
17:27:36 **25** everything in the second row is amphibole, would you
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17:27:40 **1** call those asbestiform or not?
17:27:44 **2** **A.** Again, I'm looking at an optical
17:27:51 **3** microscopy picture. We've got a bundle that -- I
17:27:58 **4** mean, I can't look at the micron bar. Possibly just
17:28:01 **5** the one in the middle because you can see individual
17:28:03 **6** fibrils.
17:28:04 **7** **Q.** Okay. If you saw that under your TEM,
17:28:07 **8** would you label that as asbestos?
17:28:08 **9** **A.** Well, I'm not looking at it under TEM. So
17:28:13 **10** if it's under an optical microscopy method and it
17:28:16 **11** meets the definition, it's got parallel sides, it
17:28:20 **12** looks like it has multiple fibers in the bundle, that
17:28:23 **13** by definition is asbestiform.
17:28:25 **14** **Q.** And why do you say it looks like it has
17:28:28 **15** multiple fibers in the bundle?
17:28:29 **16** **A.** Because I can see them.
17:28:30 **17** **Q.** Okay. You're referring to the lines that
17:28:34 **18** go from the northwest towards the southeast starting
17:28:36 **19** in the top?
17:28:37 **20** **A.** Yes, sir.
17:28:37 **21** **Q.** Okay. In the third row, assuming those
17:28:40 **22** are amphiboles, do you have enough information to
17:28:44 **23** determine whether they're asbestiform?
17:28:46 **24** **A.** I can't really see what we have here under
17:28:50 **25** these. And I'm assuming the fourth and five row --
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17:28:56 **1** **Q.** Well, let's not get ahead of ourselves.
17:29:00 **2** Now, in the third row, do you have enough
17:29:04 **3** information from these pictures to see whether
17:29:07 **4** they're bundles or fibers?
17:29:09 **5** **A.** No. It's too out of focus.
17:29:12 **6** **Q.** Okay.
17:29:15 **7** **A.** I would -- looks like you have dark field
17:29:15 **8** here. I would have to see this in the TEM.
17:29:17 **9** **Q.** Okay. In the second row, far left, do you
17:29:21 **10** have enough -- does it appear to you whether there
17:29:24 **11** are bundles or fibers?
17:29:25 **12** **A.** No, you can't make out. Most of these are
17:29:27 **13** just particles. And I would have to be looking at
17:29:31 **14** this one that has parallel sides. But I would have
17:29:36 **15** to be determining if I could see individual fibers in
17:29:38 **16** it or not.
17:29:39 **17** **Q.** In the fourth row, second from the bottom,
17:29:46 **18** are these asbestiform?
17:29:48 **19** **A.** Maybe.
17:29:50 **20** **Q.** What additional information would you need
17:29:53 **21** to determine that?
17:29:53 **22** **A.** I need to be looking at it in the TEM
17:29:58 **23** or -- so that I can make a determination. The size,
17:30:02 **24** the magnification.
17:30:08 **25** **Q.** Do you have enough information in the
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17:30:10 **1** second -- in that second-to-last row, those three
17:30:13 **2** pictures, to determine whether that's asbestiform?
17:30:15 **3** **A.** I wouldn't make that call either way
17:30:19 **4** unless I could be looking at it under the TEM. It
17:30:22 **5** looks like very little magnification. And I
17:30:25 **6** apologize, but they're fairly poor photographs.
17:30:28 **7** **Q.** Okay. In the last row, same question. In
17:30:31 **8** those three pictures at the very bottom of
17:30:34 **9** Exhibit 22, are those -- see the single fibers -- the
17:30:37 **10** single item in the middle, would you call that
17:30:40 **11** asbestiform?
17:30:41 **12** **A.** It has parallel sides. I can't see
17:30:48 **13** individual fibers. But I would call that a regulated
17:30:52 **14** asbestos fiber or bundle, maybe.
17:30:55 **15** Again, I would need to be looking at the
17:30:57 **16** TEM analysis of these or at least better photographs.
17:31:01 **17** **Q.** Okay. So the bottom six are all TEM
17:31:08 **18** photomicrographs from you? You realize that; right?
17:31:12 **19** MR. CIRSCH: Object to form.
17:31:13 **20** THE WITNESS: And that's fine. If you
17:31:14 **21** tell me which ones they are, at least I can get
17:31:17 **22** better images.
17:31:17 **23** **Q.** (By Mr. Chachkes) These are the images
17:31:20 **24** you provided to us; right?
17:31:22 **25** **A.** Well, when we provide the book, we provide
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17:31:25 **1** a large photograph that has better resolution,
17:31:30 **2** et cetera.
17:31:33 **3** **Q.** Okay. Yeah, let's go look at -- let's
17:31:35 **4** look in the book, the upper left. So from the
17:31:38 **5** bottom -- what?
17:31:44 **6** MS. TROVATO: I'll let you know which one
17:31:45 **7** I have marked.
17:31:47 **8** MR. CHACHKES: Okay. I'm going to grab
17:31:48 **9** one for you from the book. Just tear it out.
17:31:54 **10** Okay. Let's mark it as Exhibit 23.
17:31:59 **11** (Defendants' Exhibit 23 was marked for
12 identification.)
17:32:21 **13** (Off the record.)
17:32:21 **14** **Q.** (By Mr. Chachkes) Okay. So around
17:32:23 **15** page 985. Okay. So this one corresponds to second-
17:32:28 **16** to-the-last row, far right; correct?
17:32:34 **17** **A.** Yes.
17:32:34 **18** **Q.** Okay. Are you looking at something that's
17:32:36 **19** asbestiform there?
17:32:37 **20** **A.** I'm looking at a regulated asbestos
17:32:43 **21** structure. We have talc underneath it. But I would
17:32:46 **22** see individual fibers -- you know, I'm not on the
17:32:51 **23** TEM. This is only 1/2 micrometer in width, but it
17:32:54 **24** looks like we have individual fibers in here. So
17:32:56 **25** yes.
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17:32:56 **1** **Q.** Okay. Is this -- so for those of us who
17:33:03 **2** are trying to determine whether you made the right
17:33:05 **3** call, is this photomicrograph enough to determine the
17:33:08 **4** morphology of what we're looking at?
17:33:13 **5** **A.** Yes.
17:33:14 **6** **Q.** Okay. In your old reports, the reports
17:33:33 **7** that were the non-MDL samples, would you agree that
17:33:36 **8** you characterized the majority of the particles
17:33:38 **9** identified as fibrous, not bundles?
17:33:41 **10** MR. CIRSCH: Object to form.
17:33:42 **11** THE WITNESS: I don't think I ever counted
17:33:45 **12** them up.
17:33:45 **13** **Q.** (By Mr. Chachkes) Okay. In your MDL --
17:33:50 **14** but the majority, the large majority is fiber, not
17:33:53 **15** bundles in the old MDL reports?
17:33:56 **16** MS. O'DELL: Object to form.
17:33:56 **17** THE WITNESS: I'm not sure I agree with
17:33:58 **18** that.
17:33:58 **19** **Q.** (By Mr. Chachkes) I'm sorry, the old
17:33:59 **20** non-MDL reports.
17:34:00 **21** **A.** I'd have to look at them to see if I agree
17:34:03 **22** with that or not.
17:34:03 **23** **Q.** Okay. In your new -- the MDL reports,
17:34:07 **24** about 96 percent of the particles your analysts
17:34:11 **25** identify are bundles; correct?
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17:34:12 **1** **A.** Correct.
17:34:12 **2** **Q.** If there's a stark difference between the
17:34:18 **3** ratio of fibers to bundle found as compared between
17:34:21 **4** the MDL sample analysis and the non-MDL sample
17:34:25 **5** analysis, what would explain that?
17:34:26 **6** MR. CIRSCH: Object to form.
17:34:27 **7** THE WITNESS: That there was more bundles
17:34:29 **8** than fibers.
17:34:30 **9** **Q.** (By Mr. Chachkes) Aren't they supposed to
17:34:31 **10** be the same thing, representative sample of J&J talc?
17:34:35 **11** MR. CIRSCH: Object to form.
17:34:35 **12** THE WITNESS: Not necessarily.
17:34:36 **13** **Q.** (By Mr. Chachkes) Why not?
17:34:37 **14** **A.** It's just a matter of where -- the area in
17:34:40 **15** the mine and what was dug out, if that was correct,
17:34:42 **16** then we should say that all J&J talc has these
17:34:46 **17** concentrations of asbestos. So that doesn't bother
17:34:50 **18** me.
17:34:50 **19** **Q.** You think it might be random chance that
17:34:55 **20** the same mine samples in your old reports you report
17:35:00 **21** majority of fibers, and in your new reports you
17:35:04 **22** report as almost exclusively bundles?
17:35:06 **23** MR. CIRSCH: Object to form.
17:35:08 **24** THE WITNESS: We just call them as we see
17:35:09 **25** them.
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17:35:10 **1** **Q.** (By Mr. Chachkes) But is it random
17:35:11 **2** chance? That's what I'm asking.
17:35:12 **3** **A.** I don't know if it's random chance or not.
17:35:16 **4** These are what we distinguish as fibers and bundles.
17:35:20 **5** **Q.** Okay. One would expect a random sample of
17:35:23 **6** bottles from a Vermont mine over time to have the
17:35:27 **7** same ratio whether you are looking last year or this
17:35:30 **8** year; right?
17:35:31 **9** MR. CIRSCH: Object to form.
17:35:32 **10** THE WITNESS: I'm only aware of in the old
17:35:36 **11** samples that there was two that could be said
17:35:39 **12** came from Vermont. So we're looking at a much
17:35:42 **13** bigger population of Vermont samples than we
17:35:45 **14** were of the originals. And one of those was a
17:35:50 **15** MDL sample. So you're comparing apples and
17:35:54 **16** oranges.
17:35:55 **17** **Q.** (By Mr. Chachkes) What about the Italian?
17:35:56 **18** **A.** The Italian, I'd have to look at it and
17:36:01 **19** count them up because there wasn't that many fibers
17:36:04 **20** as compared to the others, so we have a bigger pool
17:36:06 **21** of fibers and bundles.
17:36:07 **22** **Q.** If you did the entire set of MDL samples
17:36:10 **23** over again, would you expect to find the same ratio
17:36:13 **24** of bundles to fibers?
17:36:17 **25** MR. CIRSCH: Object to form.
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17:36:17 **1** THE WITNESS: I don't have any expectation
17:36:19 **2** of what we're going to find or what we expect.
17:36:21 **3** We just count using the protocols and make the
17:36:25 **4** decision on what morphology it is.
17:36:27 **5** **Q.** (By Mr. Chachkes) Okay. Have you
17:36:28 **6** testified that the modified Blount TEM method you
17:36:31 **7** employed in your March 2018 report is materially
17:36:35 **8** identical to the ISO 22262?
17:36:37 **9** **A.** I don't think I -- it's not identical.
17:36:43 **10** The old Blount report uses a different heavy density
17:36:47 **11** liquid separation. But the ISO, we can use the same
17:36:52 **12** spin rate, same time for rpm and spin rate.
17:36:59 **13** But the difference is the -- even the old
17:37:03 **14** Blount is the same. And that's -- what's interesting
17:37:06 **15** about the ISO 22262-2, it gives you the leeway to use
17:37:11 **16** whatever you need to use. And the only thing it
17:37:16 **17** really specifies is the density of the heavy liquid.
17:37:21 **18** **Q.** You used the Blount TEM method in your
17:37:23 **19** March 2018 report; correct?
17:37:24 **20** **A.** Correct.
17:37:24 **21** **Q.** Was it materially identical to what's
17:37:28 **22** mandated in ISO 22262?
17:37:32 **23** **A.** ISO 22262 doesn't mandate any particular
17:37:35 **24** conditions. So you can use whatever procedures you
17:37:41 **25** feel work the best. And that's because the spin
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17:37:45 **1** rates and rpm does not really affect the overall
17:37:48 **2** concentrations, and it happened to be the same
17:37:51 **3** density, liquid density.
17:37:53 **4** **Q.** You've testified that the same four
17:37:56 **5** associates at MAS have conducted all of MAS's
17:37:58 **6** analysis of Johnson's Baby Powder in your reports
17:38:01 **7** going all the way back to 2017; is that correct?
17:38:03 **8** **MR. CIRSCH:** Object to form.
17:38:04 **9** **THE WITNESS:** We have some of the same
17:38:08 **10** people, yes.
17:38:09 **11** **Q.** (By Mr. Chachkes) Okay. What about are
17:38:11 **12** they the same? Is it the same people who were
17:38:13 **13** doing -- analyzing Johnson Baby Powder in early 2017
17:38:19 **14** as are doing it now?
17:38:22 **15** **A.** You'll have to clarify that question.
17:38:25 **16** **Q.** Well, there were four people doing
17:38:28 **17** analysis in the MDL report; right?
17:38:30 **18** **A.** Correct.
17:38:30 **19** **Q.** There are four people doing analysis in
17:38:33 **20** the reports that rely on research all the way back
17:38:39 **21** to -- analysis all the way back to 2017; correct?
17:38:42 **22** **A.** I'd have to look at that.
17:38:43 **23** **Q.** Okay. I'm asking is it the same four
17:38:46 **24** people? You don't know?
17:38:48 **25** **MR. CIRSCH:** Object to the form.
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17:38:49 **1** THE WITNESS: I'd have to look and see who
17:38:50 **2** the four people are because there are some folks
17:38:53 **3** who started doing, you know, analysis now may
17:38:57 **4** not have been doing analysis then, and there's
17:38:59 **5** some folks doing analysis then that are not
17:39:02 **6** doing analysis now. It's just easy to look in
17:39:05 **7** the count sheets and see if they're the same or
17:39:08 **8** not.
17:39:08 **9** **Q.** (By Mr. Chachkes) Is there additional
17:39:12 **10** data concerning the samples upon which you reported
17:39:15 **11** for TEM that is in a file somewhere in your
17:39:20 **12** laboratory but not printed out and not produced?
17:39:22 **13** **A.** All the data for these particular samples
17:39:25 **14** are here.
17:39:25 **15** **Q.** Okay. Was there any data generated in
17:39:28 **16** connection with the TEM analysis in this case that
17:39:30 **17** was thrown away or deleted?
17:39:32 **18** **A.** No, not that I'm aware of.
17:39:34 **19** **Q.** You personally have not conducted any of
17:39:37 **20** the PLM testing included in your MDL report; correct?
17:39:40 **21** **A.** That is correct.
17:39:40 **22** **Q.** Did you sit with your analysts as they did
17:39:42 **23** the PLM testing?
17:39:45 **24** **A.** I have probably looked in that optical
17:39:47 **25** microscope 50 times in the last two months.
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17:39:50 **1** **Q.** So when you say you've looked in it,
17:39:52 **2** you've looked in it while your analysts were testing
17:39:58 **3** MDL samples for the purposes of your current report?
17:40:00 **4** **A.** Well, you can't -- both of you can't look
17:40:02 **5** in the microscope at the same time. A lot of times
17:40:05 **6** it's on the monitor that we use so that we can
17:40:09 **7** increase the sensitivity. But, no, I don't
17:40:12 **8** personally do the PLM analysis.
17:40:14 **9** **Q.** Yeah, but I'm trying to get the sense of
17:40:16 **10** were you actively involved looking through the
17:40:20 **11** microscope or looking along with the other person
17:40:23 **12** into the microscope for the PLM that's reported on in
17:40:25 **13** the MDL?
17:40:27 **14** **A.** I have been active with the PLM
17:40:29 **15** microscopists looking at structures, looking at
17:40:34 **16** different aspects of it, but ultimately he makes the
17:40:38 **17** decision.
17:40:38 **18** **Q.** Okay. So the decisions -- the opinions in
17:40:43 **19** your report about whether the PLM was a positive for
17:40:46 **20** asbestos, those are the opinions of your analysts?
17:40:50 **21** **A.** It's not an opinion.
17:40:51 **22** **MS. O'DELL:** Form.
17:40:52 **23** **THE WITNESS:** It meets the definition. It
17:40:54 **24** has the right crystalline information. It meets
17:40:58 **25** all the different definitions. To me, that is
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17:41:00 **1** not an opinion.
17:41:01 **2 Q.** (By Mr. Chachkes) Okay. Those are the
17:41:03 **3** conclusions of your analysts?
17:41:05 **4 A.** Yes.
17:41:06 **5 Q.** Okay. You have personally never tested a
17:41:08 **6** talc sample for asbestos from start to finish
17:41:10 **7** yourself?
17:41:11 **8 A.** That is correct.
17:41:11 **9 Q.** You're not trained in using PLM for the
17:41:14 **10** purposes of testing talc for asbestos?
17:41:17 **11** MR. CIRSCH: Object to form.
17:41:18 **12** THE WITNESS: I have not taken a PLM
17:41:20 **13** course for asbestos.
17:41:20 **14 Q.** (By Mr. Chachkes) You've not published
17:41:25 **15** any PLM methodologies?
17:41:27 **16 A.** No, sir. We're not using our
17:41:29 **17** methodologies. We're using the standard protocol
17:41:33 **18** methodologies. So if we were to publish -- when we
17:41:36 **19** publish this, we would be publishing that this is the
17:41:39 **20** method we used. That's like everybody else.
17:41:42 **21 Q.** Have you published any PLM work testing
17:41:44 **22** for asbestos in any context?
17:41:47 **23 A.** Yes.
17:41:51 **24 Q.** What is it?
17:41:52 **25 A.** Our gasket study, our vermiculite studies,
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17:41:59 **1** our -- that have been published. A number of papers
17:42:03 **2** are published where it's going to be a study on
17:42:05 **3** exposure. You usually have to determine what the
17:42:08 **4** concentration of asbestos is in the materials before
17:42:11 **5** you publish that.
17:42:12 **6 Q.** Those are published in peer-reviewed
17:42:14 **7** literature?
17:42:14 **8 A.** Yes, sir.
17:42:15 **9 Q.** Okay. But those are not finding asbestos
17:42:17 **10** in talc; right?
17:42:21 **11 A.** No, sir. These are all construction
17:42:25 **12** products.
17:42:26 **13 Q.** Are you an expert in PLM?
17:42:30 **14 A.** I think I know more than the average
17:42:32 **15** layperson.
17:42:32 **16 Q.** Are you an expert in PLM?
17:42:36 **17** MR. CIRSCH: Object to form.
17:42:37 **18** THE WITNESS: Again, that's up to a judge
17:42:38 **19** to be an expert.
17:42:39 **20** I know how the analysis is done, I could
17:42:42 **21** do an analysis if I -- it would take me a lot
17:42:46 **22** longer than what people typically do.
17:42:47 **23 Q.** (By Mr. Chachkes) One of the
17:42:48 **24** disadvantages of PLM that you cite is that it cannot
17:42:51 **25** resolve particles less than 1/2 micrometer; is that
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17:42:56 **1** correct?
17:42:56 **2 A.** Individual fibers, unless they have a
17:42:58 **3** number of fibers in a bundle. But we don't see
17:43:00 **4** individual fibers. In fact, we haven't seen any
17:43:04 **5** individual fiber in any of these analyses that we've
17:43:07 **6** done. They've all been very large bundles.
17:43:09 **7 Q.** Is it unambiguously true that asbestos
17:43:19 **8** particles must be at least 1/2 micrometer in the
17:43:21 **9** smallest dimension to be visible under PLM?
17:43:23 **10 A.** That's what's stated. We never see
17:43:25 **11** individual fibers of any size. Everything that we
17:43:30 **12** have run across is these very large bundles that have
17:43:33 **13** multiple fibers in them.
17:43:35 **14 Q.** But I'm talking about not what you're
17:43:37 **15** actually seeing, but this is a matter of the
17:43:41 **16** resolution.
17:43:42 **17** Must asbestos particles be at least 1/2
17:43:44 **18** micrometer in the smallest dimension to be visible
17:43:49 **19** under PLM?
17:43:49 **20 A.** It may be visible, but it's hard to go
17:43:53 **21** through the dispersion staining and everything
17:43:55 **22** associated to make a positive identification.
17:43:57 **23** So maybe theoretically that's possible,
17:44:01 **24** but it's not something that's routinely seen, that I
17:44:04 **25** know of.
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17:44:04 **1 Q.** Do you have the ability to detect asbestos
17:44:08 **2** fibers with a width of approximately .3 micrometers
17:44:13 **3** by PLM?
17:44:15 **4 A.** Again, it may be theoretically possible,
17:44:19 **5** but I'm not aware that it's routinely done. We've
17:44:23 **6** never seen any in the cosmetic talc.
17:44:25 **7 Q.** Shouldn't the particle distribution be on
17:44:33 **8** a bell curve so that you would expect that some
17:44:37 **9** exist?
17:44:37 **10** MR. CIRSCH: Object to form.
17:44:38 **11** THE WITNESS: I'm sure there is -- it is
17:44:41 **12** in there because a lot of these we have positive
17:44:43 **13** TEMs. But these two techniques have different
17:44:47 **14** size distributions that they can see or they can
17:44:49 **15** resolve or not resolve to be able to absolutely
17:44:52 **16** determine if it is regulated asbestos or not.
17:44:56 **17 Q.** (By Mr. Chachkes) Is it your position
17:45:01 **18** that particles below 1/2 micrometer are not
17:45:04 **19** resolvable because your analysts have never observed
17:45:08 **20** particles of that width or smaller?
17:45:09 **21 A.** It's my position that these are fibers,
17:45:12 **22** and single fibers are not being resolved in this
17:45:15 **23** matrix or seen by the PLM.
17:45:20 **24 Q.** Is that because your analysts haven't
17:45:22 **25** observed it, or is it just because of the nature of
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17:45:24 **1** the devices? Do you have some higher level
17:45:27 **2** understanding of the nature of the devices?
17:45:29 **3** MR. CIRSCH: Object to form.
17:45:30 **4** **Q.** (By Mr. Chachkes) It is empirical or is
17:45:32 **5** it something different?
17:45:32 **6** MR. CIRSCH: Object to form.
17:45:33 **7** THE WITNESS: I don't know if it's
17:45:36 **8** empirical or not.
17:45:37 **9** I mean, we haven't answered all the
17:45:40 **10** questions about the PLM analysis of cosmetic
17:45:43 **11** talc. But we do know that to do a PLM analysis
17:45:48 **12** properly, you have to spend the time necessary.
17:45:51 **13** You have to look at the sample in dispersion
17:45:56 **14** staining. You need a high definition camera as
17:45:58 **15** well as a monitor so that you can resolve and
17:46:02 **16** get the focal plane necessary to see individual
17:46:04 **17** fibers.
17:46:06 **18** But we haven't run across individual
17:46:08 **19** fibers. I know every protocol says, well, you
17:46:10 **20** can see down to .5, you can see down to .3.
17:46:14 **21** There's one thing about seeing them. There's
17:46:16 **22** another thing going through the process of being
17:46:18 **23** able to see the colors in the dispersion
17:46:21 **24** staining, the extinction angle.
17:46:24 **25** I just don't know if that's really
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17:46:26 **1** possible because this type of matrix that we're
17:46:30 **2** looking at is so different than what PLM
17:46:32 **3** analysts are typically dealing with.
17:46:35 **4** **Q.** (By Mr. Chachkes) Did MAS test any talcum
17:46:41 **5** powder samples with the ISO 22262 method prior to the
17:46:44 **6** analysis included in your reports in this case?
17:46:47 **7** MR. CIRSCH: Object to form.
17:46:48 **8** THE WITNESS: No. I mean, we may have --
17:46:51 **9** you know, we're slowly trying to work through
17:46:54 **10** the old non-MDLs so that we can compare apples
17:46:58 **11** to oranges. But when we get done with that,
17:47:03 **12** we'll issue another report.
17:47:03 **13** **Q.** (By Mr. Chachkes) Have you analyzed the
17:47:05 **14** old talcum powder samples under ISO 22262 recently?
17:47:12 **15** **A.** I don't know. I haven't been focused in
17:47:15 **16** on that. There may be some done.
17:47:17 **17** **Q.** Is it possible -- strike that.
17:47:22 **18** ISO 22262 method is promulgated by the
17:47:28 **19** International Organization for Standardization; is
17:47:28 **20** that correct?
17:47:29 **21** **A.** Yes, sir.
17:47:29 **22** **Q.** Are you currently a member of any of the
17:47:32 **23** ISO national standards bodies?
17:47:33 **24** **A.** I am not.
17:47:34 **25** **Q.** Did you vote on any of the ISO standards?
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17:47:37 **1** **A.** I did not.
17:47:39 **2** **Q.** Did you participate in the drafting of any
17:47:42 **3** ISO standards?
17:47:43 **4** **A.** I did not.
17:47:44 **5** **Q.** Have you spoken with any of the authors of
17:47:46 **6** any of the ISO standards that we talked about today?
17:47:50 **7** **A.** Not in some time, but not specifically
17:47:53 **8** about the 22262-1 and 2.
17:47:55 **9** **Q.** What about 3?
17:47:57 **10** **A.** No, sir, I haven't spoken to anybody about
17:48:00 **11** 3 -- any of the authors of 3.
17:48:01 **12** **Q.** Which of the three parts of the ISO 22262
17:48:06 **13** did your analysts employ in the analysis of the ISO
17:48:11 **14** PLM portion of your report?
17:48:15 **15** MR. CIRSCH: Object to form.
17:48:16 **16** THE WITNESS: All the counting rules, all
17:48:18 **17** the -- what's defined as asbestiform, what's the
17:48:22 **18** 20-to-1. Everything that's used in there.
17:48:26 **19** **Q.** (By Mr. Chachkes) So you're saying it
17:48:28 **20** didn't matter, it's the same in all of 1 -- part 1,
17:48:31 **21** part 2, and part 3?
17:48:32 **22** **A.** Well, I misunderstood the question.
17:48:34 **23** **Q.** Yeah, let me ask it again a little better.
17:48:36 **24** Which of part 1, part 2, or part 3 did
17:48:41 **25** your analysts use when they analyzed the MDL samples
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17:48:48 **1** under PLM?
17:48:49 **2** **A.** Part 1.
17:48:49 **3** **Q.** Do you know when those methods in part 1
17:48:53 **4** were promulgated?
17:48:55 **5** **A.** Looks like 2012/07/01.
17:49:06 **6** **Q.** What do you mean by 2012/07/01?
17:49:12 **7** **A.** I'm just looking at when it says it was
17:49:14 **8** issued. ISO -- so it has 2012, first edition, and I
17:49:22 **9** don't know if they're using 07 as the day and 01 as
17:49:26 **10** the month or the other way around.
17:49:27 **11** **Q.** So part 1 was promulgated in 2012?
17:49:31 **12** **A.** Yes, sir.
17:49:31 **13** **Q.** Okay. Are you aware of any other talc
17:49:34 **14** testing methods published in the scientific
17:49:36 **15** literature from 1991 to 2014 that include a
17:49:41 **16** concentration method?
17:49:43 **17** **A.** Let's see. When was --
17:49:46 **18** **Q.** You should use yours.
17:49:49 **19** **A.** I'm just looking at the date.
17:49:51 **20** This one was 2014.
17:49:53 **21** **Q.** You say this one's part 2; correct?
17:49:55 **22** **A.** Part 2.
17:49:55 **23** **Q.** Yeah. So I'm saying between 1991 and
17:49:58 **24** 2014, are you aware of any testing -- talc testing
17:50:01 **25** methods in the published scientific literature that
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17:50:03 1 include a concentration method?
17:50:16 2 A. The 1989 and 1990 papers published by
17:50:19 3 Blount. She's analyzing talc. She's using the
17:50:23 4 concentration method.
17:50:25 5 Q. Are you aware of any other?
17:50:27 6 A. That specifically say talc, no.
17:50:30 7 Q. Are you aware of any other talc testing
17:50:33 8 methods published in the scientific literature prior
17:50:36 9 to 1991 that include a concentration method?
17:50:39 10 A. Not in the published literature, no.
17:50:44 11 Q. One strength of PLM is that it can provide
17:50:48 12 a qualitative estimate of the weight percentage of
17:50:52 13 asbestos; true?
17:50:53 14 A. That is a strength, yes.
17:50:55 15 Q. What does the word qualitative mean in
17:50:58 16 that answer?
17:50:59 17 A. That it's an estimate based on
17:51:01 18 petrographic standards for how much material is --
17:51:09 19 that you're estimating on.
17:51:11 20 Q. Your analysts conducted a visual
17:51:14 21 estimation of the concentration of asbestos fibers in
17:51:16 22 the talc samples?
17:51:17 23 A. Asbestos bundles, yes, sir.
17:51:19 24 Q. Okay. Your report also references
17:51:25 25 generated weight percentage standards; correct?
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17:51:29 1 A. Yes.
17:51:29 2 Q. How were your lab's weight percentage
17:51:33 3 standards generated?
17:51:35 4 A. You mean the spike samples?
17:51:37 5 Q. Yes.
17:51:37 6 A. Taking that one JBP, I think it's number
17:51:51 7 13, and then you mix the appropriate materials
17:51:53 8 together so that you get a weight percent -- a
17:51:58 9 weighted percent, where you put -- say,
17:52:02 10 hypothetically, you know, 5 grams of tremolite and
17:52:05 11 then you then dilute the sample with additional talc
17:52:08 12 to make it .1 or .2 or .3. Standard method.
17:52:13 13 Q. Okay. Did you produce those generated
17:52:16 14 calculations?
17:52:17 15 A. No.
17:52:18 16 Q. Okay. We request that you produce those.
17:52:20 17 In your report you write that for positive
17:52:25 18 samples a visual estimation of the quantity of
17:52:28 19 asbestos observed was based on eye calibration
17:52:32 20 through review of lab-generated weight percentage
17:52:36 21 standards.
17:52:36 22 Does that ring a bell?
17:52:38 23 A. Yes.
17:52:38 24 Q. What is eye calibration?
17:52:39 25 A. It's a petrographic term for when you're
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17:52:41 1 looking at the area that is covered by the asbestos
17:52:45 2 versus the area that you're looking at. So there's
17:52:48 3 calibrated petrographic materials to help optical
17:52:54 4 microscopists to make these qualitative estimates.
17:52:58 5 Q. How often do you update your lab's weight
17:53:02 6 percentage standards?
17:53:03 7 A. I think we updated them the last time we
17:53:08 8 sent stuff to Lee Poye.
17:53:10 9 Q. And what regularity -- with what
17:53:14 10 regularity do you update those?
17:53:17 11 A. We don't have a regulatory. We make new
17:53:19 12 standards and send them off; and if we need
17:53:22 13 additional standards, we make them again.
17:53:24 14 Q. Who generated those standards?
17:53:25 15 A. Victoria Panariello.
17:53:28 16 Q. Okay. Did you monitor her when she did
17:53:31 17 that?
17:53:32 18 A. Did I sit here and -- stand there and
17:53:34 19 watch her? No.
17:53:35 20 Q. Did you monitor her in any other way?
17:53:37 21 A. No.
17:53:37 22 Q. Are you aware your method includes a
17:53:41 23 qualification that visual estimations of asbestos
17:53:43 24 concentrations pursuant to this method have been
17:53:46 25 demonstrated to consistently yield an overestimate of
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17:53:49 1 the proportion of asbestos?
17:53:53 2 MS. O'DELL: Object to the form.
17:53:54 3 THE WITNESS: I'm sorry, where is this
17:53:55 4 stated?
17:53:56 5 Q. (By Mr. Chachkes) In one of the ISO
17:53:57 6 documents that you're referring to, does it say that
17:54:00 7 this method that we're talking about consistently
17:54:04 8 yields an overestimate of the proportion of asbestos?
17:54:08 9 Are you aware of that?
17:54:09 10 A. I don't recall that.
17:54:10 11 Q. Okay. Do you believe that this
17:54:16 12 methodology we're talking about consistently yields
17:54:18 13 an overestimate of the proportion of asbestos?
17:54:20 14 A. No.
17:54:20 15 Q. Did your analyst use a point counting
17:54:45 16 method?
17:54:46 17 A. No.
17:54:46 18 Q. ISO 22262-2 includes a method for point
17:54:51 19 counting by PLM; correct?
17:54:53 20 A. It does.
17:54:54 21 Q. So instead of following the point counting
17:55:01 22 method in ISO 22262-2, you used an estimation based
17:55:07 23 on eyeball?
17:55:10 24 MR. CIRSCH: Form.
17:55:11 25 THE WITNESS: Estimation-based typical PLM
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17:55:12 **1** analysis, that's also in the 22262-1. They give
17:55:16 **2** you both, the ability to do either one.
17:55:19 **3 Q.** (By Mr. Chachkes) I'm talking about
17:55:21 **4** 22262-2, is there the eyeballing method in 22262-2?
17:55:27 **5** MR. CIRSCH: Object to form.
17:55:27 **6** THE WITNESS: We only do the section 16,
17:55:30 **7** section 14 in the counting rules for TEM in the
17:55:35 **8** ISO 22262-2.
17:55:37 **9 Q.** (By Mr. Chachkes) So is it your opinion
17:55:38 **10** that the ISO 22262-2 point counting method is not
17:55:44 **11** required; it's just merely optional?
17:55:48 **12 A.** 22262, if you are going to do PLM, it goes
17:55:52 **13** back to the 1, and it provides you the ability to do
17:55:55 **14** either/or.
17:55:56 **15 Q.** Okay. So it's your opinion that point
17:55:59 **16** counting in 22262-2 is optional?
17:56:03 **17** MR. CIRSCH: Object to form.
17:56:03 **18** THE WITNESS: You're going to have to show
17:56:05 **19** me where the point counting is in 22262-2.
17:56:09 **20 Q.** (By Mr. Chachkes) Okay. Sitting here
17:56:10 **21** today, rather than burning the time on that, do you
17:56:16 **22** have any reason to believe it's not optional, that it
17:56:18 **23** was required, you just didn't do it?
17:56:20 **24** MS. O'DELL: Object to the form.
17:56:21 **25** THE WITNESS: No, I don't believe that.
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17:56:23 **1 Q.** (By Mr. Chachkes) Okay. Do you have any
17:56:23 **2** reason to believe it's optional and so you had the
17:56:28 **3** option of not going it?
17:56:29 **4** MS. O'DELL: Object to form.
17:56:30 **5** MR. CIRSCH: Object to form.
17:56:30 **6** THE WITNESS: We follow the 22262-1 PLM
17:56:34 **7** method. It provides the ability to do both
17:56:37 **8** types of estimation. And point counting is
17:56:41 **9** another type of estimation.
17:56:43 **10 Q.** (By Mr. Chachkes) For those particles
17:56:44 **11** that you determined were asbestiform in your report,
17:56:48 **12** for each one, is it your opinion that these are
17:56:51 **13** minerals with a fibrosity in which the fibers and
17:56:57 **14** fibrils possess a high tensile strength and
17:57:00 **15** flexibility?
17:57:01 **16** MR. CIRSCH: Object to form.
17:57:01 **17** MS. O'DELL: Would you repeat that,
17:57:02 **18** please?
17:57:03 **19** MR. CHACHKES: Can you read that back?
17:57:24 **20** (The record was read by the reporter.)
17:57:24 **21** MR. CIRSCH: Object to form.
17:57:25 **22** THE WITNESS: Again -- I guess we could
17:57:27 **23** rehash this -- that is a general definition.
17:57:29 **24** The protocol does not provide you any
17:57:31 **25** methodology to determine high tensile strength
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17:57:35 **1** or any tensile strength.
17:57:38 **2** It does not define what high is. It does
17:57:40 **3** not define how you determine flexibility on a
17:57:43 **4** microscopic scale.
17:57:45 **5** I guess that is just an opinion of
17:57:48 **6** somebody taking a look at it. But it's not
17:57:51 **7** required for this analysis.
17:57:53 **8 Q.** (By Mr. Chachkes) I'm not asking a
17:57:55 **9** question at all about what's required. I'm asking
17:57:57 **10** about what your opinion is. Do the fibers you
17:58:02 **11** identified as asbestiform in your report possess high
17:58:06 **12** tensile strength and flexibility?
17:58:08 **13** MR. CIRSCH: Object to form.
17:58:09 **14 Q.** (By Mr. Chachkes) Did you determine that?
17:58:10 **15 A.** You can't determine it. The protocol
17:58:12 **16** doesn't tell you how to determine it. It doesn't
17:58:14 **17** provide any guidance on how to determine it. It
17:58:16 **18** doesn't tell you what, quote, high tensile strength
17:58:20 **19** is.
17:58:21 **20** High tensile strength to me, personally,
17:58:21 **21** probably 100 psi. I don't think that's what they
17:58:25 **22** mean, but at least there should be some guidance of
17:58:28 **23** some sort to say, okay, somehow you have to put an
17:58:30 **24** Instron inside your optical microscope and grab a
17:58:35 **25** microscopic bundle and put it in the Instron and then
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17:58:37 **1** measure the tensile strength, and it has to be over
17:58:41 **2** 5,000 psi. None of that exists.
17:58:43 **3** A methodology is supposed to -- for a
17:58:46 **4** person using a methodology is step A, step B, step C,
17:58:51 **5** step D. There is no methodology for determining
17:58:55 **6** tensile strength, much less an undefined high tensile
17:58:58 **7** strength.
17:58:59 **8 Q.** Is there anything in the published
17:59:00 **9** literature that allows a scientist to determine the
17:59:03 **10** tensile strength and flexibility of a putative
17:59:07 **11** asbestos fiber?
17:59:07 **12 A.** Not individual fibers, no. There's plenty
17:59:10 **13** of literature that geologists walking around in a
17:59:15 **14** mine can make a grab sample, usually 10 to
17:59:18 **15** 15 centimeters long, they'll tape it to paper, it's
17:59:21 **16** very flexible at that, and then they'll put it in an
17:59:24 **17** Instron and pull it, and then they can determine the
17:59:27 **18** tensile strength.
17:59:28 **19 Q.** Have you ever heard of -- sorry.
17:59:28 **20 A.** Go ahead. I'm sorry.
17:59:30 **21 Q.** Did you ever hear of a PLM scientist
17:59:33 **22** looking at a sample and pushing it down and if it
17:59:36 **23** breaks versus whether it bends, that relates to
17:59:40 **24** tensile strength? Have you ever heard of that?
17:59:41 **25** MR. CIRSCH: Object to form.
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17:59:42 **1** THE WITNESS: No. There's no protocol for
17:59:45 **2** that.
17:59:45 **3** MR. CIRSCH: Alex, we probably should
17:59:47 **4** break any time in the next few minutes, if we
17:59:50 **5** can.
6 MR. CHACHKES: Yeah, we can take a break,
18:01:21 **7** that's fine.
18:01:21 **8** (Recess from 6:01 p.m. to 6:53 p.m.)
19:15:25 **9** Q. (By Mr. Chachkes) Dr. Longo, your
19:15:52 **10** analysts reported identifying cleavage fragments in
19:15:56 **11** many of the samples by ISO PLM; correct?
19:15:58 **12** A. Yes.
19:15:58 **13** Q. How many anthophyllite cleavage fragments
19:16:01 **14** did your analysts detect?
19:16:03 **15** A. I don't recall them detecting any.
19:16:04 **16** Q. How many tremolite cleavage fragments did
19:16:08 **17** your analysts detect?
19:16:08 **18** A. We just determined -- we didn't do a count
19:16:11 **19** of how many cleavage fragments, only that they were
19:16:13 **20** present.
19:16:14 **21** Q. Did you produce the data regarding the
19:16:16 **22** cleavage fragment particles in these samples?
19:16:20 **23** A. I produced all the data we have. Some of
19:16:22 **24** the photographs you can see some of the cleavage
19:16:26 **25** fragments, others you can't.
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19:16:27 **1** Q. Did you quantify identified cleavage
19:16:32 **2** fragments the way you quantified identified
19:16:35 **3** asbestiform fibers and bundles?
19:16:36 **4** A. No.
19:16:37 **5** Q. And you don't report on cleavage fragments
19:16:41 **6** in your report; correct? I'm sorry, strike that.
19:16:45 **7** You don't report on the concentration of
19:16:47 **8** cleavage fragments in your report; correct?
19:16:49 **9** A. I do not.
19:16:50 **10** Q. Okay. And you did not take that data?
19:16:54 **11** A. Other than to note that they were present.
19:16:57 **12** Q. Okay. And you cannot state to a
19:17:00 **13** reasonable degree of scientific certainty what the
19:17:02 **14** concentration of cleavage fragments in any of these
19:17:04 **15** samples were; correct?
19:17:05 **16** A. We did not quantify the numbers of
19:17:09 **17** cleavage fragments that were observed other than that
19:17:12 **18** they were present.
19:17:13 **19** MR. CHACHKES: Okay. Let's look at this
19:17:15 **20** one.
19:17:19 **21** All right. We're going to look at a
19:17:21 **22** sample where the analyst reported both cleavage
19:17:24 **23** fragments and asbestos by PLM. Let's mark 24.
24 (Defendants' Exhibit 24 was marked for
19:17:43 **25** identification.)
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19:17:43 **1** Q. (By Mr. Chachkes) So you see at the
19:17:44 **2** bottom, this is a -- actually, what do you call this
19:17:50 **3** count sheet here, this sheet, Exhibit 24?
19:17:53 **4** A. It's the PLM analysis bench sheet.
19:17:56 **5** Q. Okay. So this Exhibit 24, which is your
19:17:58 **6** PLM analysis bench sheet for a particular sample, you
19:18:01 **7** see at the bottom that both cleavage fragments and
19:18:07 **8** asbestos particles were observed?
19:18:09 **9** A. Yes.
19:18:10 **10** Q. Okay. I see it says -- is it both
19:18:15 **11** actinolite and tremolite cleavage fragments were
19:18:18 **12** observed? Am I reading that right?
19:18:19 **13** A. Yes.
19:18:19 **14** Q. And let's go to -- and this is from your
19:18:24 **15** report, pages 120 to 128 from your January report,
19:18:28 **16** the analysis for bottle M68503-010-BL1; do you see
19:18:37 **17** that?
19:18:37 **18** A. Yes.
19:18:38 **19** Q. Okay. So let's turn to the picture -- the
19:18:47 **20** first picture we get to, which is I guess on page 2
19:18:50 **21** of this document.
19:18:51 **22** Which are cleavage fragments and which are
19:18:53 **23** asbestiform, or can you not tell?
19:18:56 **24** A. Well the one that we see here that's
19:18:58 **25** measured as 69 micrometers, that is asbestiform. We
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19:19:03 **1** have many talc particles, and --
19:19:06 **2** Q. How do you know which are the talc
19:19:10 **3** particles?
19:19:10 **4** A. I'm looking at them. Because under
19:19:13 **5** dispersion staining they're usually anywhere from --
19:19:17 **6** depending on the thickness of bluish to a brighter
19:19:20 **7** yellow.
19:19:21 **8** And potentially, one other asbestiform
19:19:28 **9** down in the lower left-hand -- next to a fairly good
19:19:35 **10** size talc particle.
19:19:36 **11** Q. It looks like the top of a T --
19:19:36 **12** A. Yes --
19:19:37 **13** Q. -- on its side?
19:19:39 **14** A. -- that's a good description.
19:19:41 **15** And as for cleavage fragments -- and I
19:19:44 **16** would have to be looking in the microscope, but I
19:19:46 **17** would say potentially one.
19:19:49 **18** Q. Where?
19:19:49 **19** A. There (indicating).
19:19:53 **20** Q. So you're pointing to it looks like a
19:19:56 **21** yellow kernel of corn somewhere center left, and
19:19:59 **22** there's a very small kind of orangish stain right to
19:20:03 **23** the right of it; is that what you're looking at?
19:20:05 **24** A. That's what I'm saying, potentially one.
19:20:08 **25** Q. Okay. What about the next page? Do you
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19:20:14 **1** see any asbestiform particles, any cleavage
19:20:17 **2** fragments?
19:20:18 **3** **A.** Well, we're looking at the exact same
19:20:25 **4** material. Now we're in perpendicular dispersion,
19:20:29 **5** which you have this color change, so there's no new
19:20:33 **6** information here.
19:20:35 **7** **Q.** Okay. And so what you identified in the
19:20:37 **8** previous page as a potential cleavage fragment, is
19:20:40 **9** that what I see, it's kind of like center, down about
19:20:43 **10** halfway, above what looks like a yellow delta.
19:20:53 **11** **A.** Yes.
19:20:57 **12** **Q.** Okay. Looking at the purple page. Tell
19:21:15 **13** me when you're there. There's something an arrow is
19:21:18 **14** pointing at. What's that?
19:21:19 **15** **A.** That's the same structure we've been
19:21:22 **16** looking at. It's at a higher magnification, 200
19:21:25 **17** times.
18 **Q.** Okay.
19:21:25 **19** **A.** So that's the actinolite/tremolite
19:21:30 **20** asbestos bundle, and the resolution on the elongation
19:21:35 **21** with the gypsum filter, if it's 530 nanometers,
19:21:42 **22** you're not resolving any of these very small
19:21:45 **23** particulates.
19:21:45 **24** **Q.** So you called it a bundle. Where are the
19:21:47 **25** fibers?
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19:21:48 **1** **A.** Well, you can't see it there, but you can
19:21:51 **2** see the fibers in the dispersion staining on both the
19:22:03 **3** perpendicular and the parallel orientations.
19:22:06 **4** **Q.** Those are the first two pages we looked
19:22:09 **5** at?
19:22:09 **6** **A.** Yes.
19:22:09 **7** **Q.** Okay. Explain how you selected the
19:22:17 **8** refractive index liquid when you conducted -- when
19:22:21 **9** you're conducting analysis.
19:22:23 **10** **A.** The 1.605 is a common refractive indices
19:22:27 **11** liquid that you can use. You can use 1.605, you can
19:22:31 **12** use a 1.63 or a 1.64; but that's, in my opinion, the
19:22:38 **13** most common refractive indices liquid for amphiboles.
19:22:43 **14** **Q.** When you call it the most common, is
19:22:46 **15** that -- can I find that in the peer-reviewed
19:22:48 **16** literature?
19:22:48 **17** **A.** Let's see. Would it say the most common?
19:22:58 **18** I don't know. But -- you know, I won't waste time,
19:23:02 **19** but in the one they'll talk about the different
19:23:09 **20** refractive indices liquids. You can use others.
19:23:11 **21** **Q.** And you're looking at Exhibit 4, which is
19:23:12 **22** the 22262 part 1?
19:23:14 **23** **A.** Yes.
19:23:14 **24** **Q.** I'm looking at page 15 where it says,
19:23:31 **25** under 7.1.4.1, RI liquids in the range of 1.605 to
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19:23:39 **1** 1.660 are required at intervals of 0005.
19:23:43 **2** Do you see that?
19:23:45 **3** **A.** Yes.
19:23:50 **4** **Q.** Okay. Is it what's in 7.1.4.1 that led
19:23:57 **5** you to 1.605 as the RI liquid?
19:24:01 **6** **A.** Yes and no. Yes, it states that 1.605.
19:24:07 **7** But, no, it's the common refractive indices liquid
19:24:11 **8** that we use that's in the R-93, so it's one of the
19:24:14 **9** common refractive indices liquids for this type of
19:24:17 **10** analysis.
19:24:18 **11** **Q.** Okay. Did you use liquids at intervals of
19:24:23 **12** 005?
19:24:24 **13** **A.** No. We just use 1.605.
19:24:32 **14** **Q.** Can RI liquid 1.605 determine whether a
19:24:38 **15** particle is anthophyllite?
19:24:39 **16** **A.** Yes.
19:24:40 **17** **Q.** Can it be used to determine whether a
19:24:43 **18** particle is talc?
19:24:44 **19** **A.** Yes. You can determine the difference
19:24:49 **20** between the talc and the anthophyllite and the
19:24:53 **21** tremolite in 1.605.
19:24:55 **22** You can use 1.55 if you want further
19:24:59 **23** identification.
19:25:00 **24** **Q.** What color would anthophyllite appear as
19:25:03 **25** using the RI liquid 1.605?
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19:25:06 **1** **A.** Under dispersion staining it's typically a
19:25:10 **2** lightish gold versus a darker, yellowish gold on the
19:25:17 **3** tremolite, as I recall correctly.
19:25:19 **4** **Q.** What about talc, what color does that show
19:25:22 **5** up?
19:25:22 **6** **A.** Anywhere from very bright, like as can be
19:25:30 **7** seen in this, to, depending on the thickness, to a
19:25:34 **8** bluish kind of grayish color.
19:25:37 **9** **Q.** Okay. If the talc folds up on itself,
19:25:40 **10** will it appear as a different color, that part that's
19:25:43 **11** folded up on itself?
19:25:44 **12** **A.** We've never seen that, but I don't believe
19:25:46 **13** so, no.
19:25:47 **14** **Q.** Okay. Does the peer-reviewed literature
19:25:53 **15** tell you what the colors will be for RI 1.605 for
19:25:57 **16** anthophyllite talc and tremolite?
19:25:58 **17** **A.** Yes. Depending on what type of microscope
19:26:04 **18** you have, if it's got an angular condenser lens and
19:26:09 **19** what the temperature is, you can go through the
19:26:11 **20** wavelengths of light and colors and pick out the
19:26:15 **21** refractive indices for these particular types of
19:26:18 **22** amphiboles.
19:26:18 **23** **Q.** Okay. Would you expect sometimes using RI
19:26:30 **24** liquid 1.605 for anthophyllite to turn up as a color
19:26:32 **25** that's completely different from lightish gold?
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19:26:35 **1** **A.** Sometimes that happens, depending on the
19:26:39 **2** thickness of the bundle, because of the way it's
19:26:43 **3** transmitted through the light, so then you have to
19:26:46 **4** look more around the edges of the bundle to get the
19:26:48 **5** appropriate colors.
19:26:49 **6** But I've seen it go from everything from a
19:26:51 **7** goldish yellow to a reddish to a blue when you get
19:26:54 **8** these really thick, multifiber bundles.
19:26:57 **9** **Q.** And where can I find in the peer-reviewed
19:27:01 **10** literature this range of colors and what they
19:27:03 **11** correspond to under RI 1.605?
19:27:06 **12** **A.** The Su article. Or any article that tells
19:27:12 **13** you how to do polarized light microscopy. You can go
19:27:16 **14** back to the early McCrone particle analysis.
19:27:31 **15** MR. CHACHKES: Okay. Let's mark as the
19:27:32 **16** next Exhibit 25.
19:27:33 **17** (Defendants' Exhibit 25 was marked for
19:27:59 **18** identification.)
19:27:59 **19** **Q.** (By Mr. Chachkes) Okay. In your expert
19:28:03 **20** opinion, is -- this is a talc particle and an
19:28:06 **21** anthophyllite particle?
19:28:08 **22** **A.** Well, you have one -- two talc particles
19:28:11 **23** that you can see for sure. This is out of focus.
19:28:15 **24** And then you have the anthophyllite asbestos bundle.
19:28:20 **25** **Q.** So the -- I'm focusing on the talc
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19:28:25 **1** particle in the center. It's your opinion that what
19:28:28 **2** happened is there's an anthophyllite fiber that has
19:28:32 **3** the exact length and is perfectly flush with the talc
19:28:37 **4** particle that happened to match perfectly that edge?
19:28:41 **5** MR. CIRSCH: Object to form.
19:28:42 **6** THE WITNESS: Yes.
19:28:48 **7** **Q.** (By Mr. Chachkes) Okay. And is there a
19:28:49 **8** chance that that actually is just the rolled up edge
19:28:51 **9** of a talc?
19:28:52 **10** **A.** No.
19:28:52 **11** **Q.** And why do you say no?
19:28:53 **12** **A.** Because you have some rolling here a
19:28:56 **13** little bit. But it doesn't matter if it rolls up;
19:29:00 **14** you're not going to get the same color like that.
19:29:02 **15** **Q.** And you said that you can get a range of
19:29:10 **16** colors for anthophyllite, including red and blue.
19:29:13 **17** Does the same apply for talc?
19:29:15 **18** **A.** No, that's not what I said. I said if you
19:29:18 **19** have a very thick bundle, you're going to have the
19:29:20 **20** range of colors. And it happens with the
19:29:22 **21** actinolite/tremolite also, but you do get the primary
19:29:25 **22** colors. Once it gets to a certain thickness,
19:29:29 **23** transmitting through the light is different. So we
19:29:33 **24** have some examples of those somewhere where you can
19:29:35 **25** get the appropriate colors. That's not rolled up
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19:29:37 **1** talc.
19:29:38 **2** **Q.** Okay. And do you have a reference in
19:29:44 **3** mind, peer-reviewed reference, that shows you what a
19:29:47 **4** rolled up talc looks like in a PLM?
19:29:49 **5** **A.** I've never seen a peer-reviewed reference
19:29:53 **6** that shows what that looks like. You know, I'll
19:29:56 **7** quote from Walter McCrone himself that he's never
19:30:01 **8** seen a rolled up talc particle.
19:30:03 **9** **Q.** And you're citing what paper?
19:30:05 **10** **A.** It's in my report, the reference to it,
19:30:09 **11** where he says exactly that he had -- for whatever
19:30:12 **12** reason, that I have never seen a rolled up talc
19:30:15 **13** particle.
19:30:16 **14** **Q.** Do you know what refractive index liquid
19:30:20 **15** it takes to make the distinction between
19:30:22 **16** anthophyllite and talc?
19:30:24 **17** **A.** You can use -- this is in 1.605.
19:30:30 **18** **Q.** Okay. Go ahead.
19:30:32 **19** **A.** You can use that. But if you're going to
19:30:35 **20** look just at the talc alone, you use the 1.5 fiber
19:30:40 **21** refractive indices liquid.
19:30:43 **22** **Q.** Okay.
19:30:43 **23** **A.** But you can't kind of mix and match here.
19:30:47 **24** If you're going to -- and we do that sometimes when
19:30:48 **25** there's no -- if there's no asbestiform bundles in
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19:30:52 **1** it, you'll see in some of our count sheets in there
19:30:56 **2** that it will have 1.55.
19:30:57 **3** **Q.** But it is your opinion that you can use
19:31:00 **4** 1.605 to distinguish anthophyllite and talc?
19:31:04 **5** **A.** Correct.
19:31:05 **6** **Q.** Okay. Is there additional data concerning
19:31:22 **7** the samples upon which you reported ISO PLM, as in a
19:31:26 **8** file somewhere in your laboratory but not printed out
19:31:28 **9** or produced?
19:31:29 **10** **A.** I don't believe so. I tried to produce
19:31:31 **11** everything that we took.
19:31:32 **12** **Q.** Okay. Was there any data generated in
19:31:34 **13** connection with ISO PLM analysis in this case that
19:31:36 **14** was either thrown away or deleted?
19:31:39 **15** **A.** No.
19:31:39 **16** **Q.** What are the differences, if any, between
19:31:45 **17** how your analysts employed the Blount method and how
19:31:50 **18** it is actually written in the 1991 article?
19:31:54 **19** **A.** The only difference is it's unable to
19:31:59 **20** really interpret how she counts the particulates or
19:32:03 **21** if she is counting the fibers per milligram of
19:32:06 **22** material. We've looked at that.
19:32:09 **23** So she gives it in numbers of fibers or
19:32:12 **24** numbers of bundles per milligram, a number count,
19:32:15 **25** which is the same thing we do, of course, in the TEM,
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19:32:19 **1** where we just follow the procedure here for the ISO
19:32:21 **2** 22262-1 for an estimated weight percent.
19:32:26 **3 Q.** Okay. But otherwise, you followed the
19:32:28 **4** 1991 Blount method to the letter?
19:32:31 **5 A.** Pretty much.
19:32:32 **6 Q.** Following the Blount concentration, your
19:32:37 **7** analysts conducted PLM pursuant to ISO 22262-1 PLM
19:32:41 **8** method; right?
19:32:43 **9 A.** That's correct.
19:32:43 **10 Q.** Blount did not use that 22262-1 PLM;
19:32:49 **11** correct?
19:32:49 **12 A.** No, she used a fiber count method so that
19:32:53 **13** if you look at her data, I think she has anywhere for
19:32:57 **14** that sample I, which is the Johnson & Johnson Vermont
19:33:02 **15** sample, 1989-1990, she finds in the range of about
19:33:05 **16** 100 to almost 235 milligrams -- fiber/bundles per
19:33:11 **17** milligram. So if you multiply that by 1,000 she's
19:33:14 **18** finding the ranges of concentrations at the higher
19:33:18 **19** end that we are.
19:33:18 **20 Q.** And --
19:33:20 **21 A.** So we followed the counting rules for
19:33:23 **22** estimating weight percent. She did what we do into
19:33:27 **23** the TEM and did a number count per milligram of talc.
19:33:32 **24 Q.** Dr. Blount's paper includes a particle
19:33:35 **25** size distribution analysis; correct?
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19:33:39 **1 A.** Particle size distribution analysis for
19:33:41 **2** the length and size of the asbestos -- tremolite
19:33:45 **3** asbestos she was finding in the PLM, yes.
19:33:47 **4 Q.** And she plotted the aspect ratios of the
19:33:50 **5** particles she viewed by PLM?
19:33:53 **6 A.** The fibrous asbestos, yes, she did.
19:33:55 **7 Q.** She did this because asbestos has a
19:33:57 **8** characteristic distribution?
19:34:00 **9 A.** Milled tremolite has a characteristic
19:34:04 **10** distribution, yes.
19:34:04 **11 Q.** Okay. And the nonasbestiform version of
19:34:09 **12** the same amphibole has a different characteristic
19:34:13 **13** distribution?
19:34:13 **14 A.** Yes, it does.
19:34:14 **15 Q.** And you did not generate a particle size
19:34:17 **16** distribution chart like the one in Blount's paper --
19:34:22 **17** the ones in Blount's paper in your report?
19:34:23 **18 A.** Not for the MDL samples, no. We did for
19:34:26 **19** the original analysis so that we could compare it to
19:34:29 **20** the NIST tremolite asbestos standard, to Blount's
19:34:34 **21** particle size, as well as the Campbell particle size.
19:34:39 **22 Q.** You included a table with average particle
19:34:43 **23** size that your analysts recorded by TEM, however,
19:34:46 **24** though; right?
19:34:46 **25 A.** Correct.
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19:34:47 **1 Q.** Dr. Blount included particles in her
19:34:50 **2** particle size distribution that were below the 3-to-1
19:34:53 **3** aspect ratio; correct?
19:34:54 **4 A.** That's correct.
19:34:54 **5 Q.** Do you have any other opinions regarding
19:34:57 **6** Dr. Blount's 1990 or 1991 papers in this case beyond
19:35:01 **7** those expressed in your report and that we just
19:35:03 **8** discussed?
19:35:03 **9 A.** No.
19:35:04 **10 Q.** Is additional data concerning the samples
19:35:08 **11** upon which you reported for Blount PLM in a file
19:35:11 **12** somewhere in your laboratory but not printed out and
19:35:13 **13** produced?
19:35:14 **14 A.** No. We've produced everything that we
19:35:17 **15** generated for the MDL.
19:35:19 **16 Q.** Okay. And all data and material
19:35:22 **17** information generated about your work for the Blount
19:35:25 **18** PLM was produced?
19:35:27 **19** MS. O'DELL: Object to the form.
19:35:28 **20** THE WITNESS: As far as I know, everything
19:35:29 **21** was produced for all the data we collected for
19:35:32 **22** the MDL samples.
19:35:34 **23 Q.** (By Mr. Chachkes) Okay. And I think I
19:35:35 **24** already know the answer, but I'm going to ask it.
19:35:37 **25** And any of the data you generated for your Blount PLM
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19:35:40 **1** analysis, was any of it thrown away or deleted?
19:35:43 **2 A.** No. We have many negatives, we have many
19:35:47 **3** positives, so we just reported what we saw.
19:35:50 **4 Q.** In your report at page 8 you state that
19:35:53 **5** you found fibrous talc in 98 percent of the Italian
19:35:56 **6** and Vermont talc samples by ISO 22262-1; correct?
19:36:00 **7 A.** That's correct.
19:36:00 **8 Q.** What's your definition of fibrous talc?
19:36:03 **9 A.** Has greater than .5 micrometers in length,
19:36:08 **10** has parallel sides, and it has at least 5-to-1 aspect
19:36:12 **11** ratio.
19:36:12 **12 Q.** Is there a scientific consensus that there
19:36:17 **13** is such a thing as fibrous talc?
19:36:21 **14** MR. CIRSCH: Object to form.
19:36:22 **15** THE WITNESS: I don't believe so.
19:36:22 **16 Q.** (By Mr. Chachkes) Are you aware of any
19:36:23 **17** epidemiologist or doctor who has studied the health
19:36:26 **18** effects of fibrous talc?
19:36:28 **19 A.** I don't testify about health effects of
19:36:30 **20** fibrous talc or regulated asbestos, so I don't have
19:36:33 **21** any opinions about that one way or the other if
19:36:35 **22** anybody has studied it. That's not my area.
19:36:37 **23 Q.** You were disclosed for health and
19:36:39 **24** regulatory definitions of talc; correct?
19:36:41 **25** MS. O'DELL: Object to the form.
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19:36:42 **1** THE WITNESS: I don't believe so.
19:36:43 **2** **Q.** (By Mr. Chachkes) Okay. And you're not
19:36:45 **3** here to testify about health and regulatory
19:36:48 **4** definitions of talc?
19:36:49 **5** **A.** I'm not testifying that fibrous talc has
19:36:52 **6** any impact on the human body whatsoever.
19:36:55 **7** **Q.** Are you aware of any regulatory
19:36:57 **8** definitions of fibrous talc?
19:37:00 **9** **A.** Fibrous talc for the protocols that we
19:37:05 **10** follow is not deemed a regulated asbestos fiber. We
19:37:10 **11** just follow the same counting rules that we do for
19:37:13 **12** asbestos to characterize what we're looking at.
19:37:18 **13** **Q.** So ISO 22262, parts 1 through 3, they
19:37:22 **14** don't define fibrous talc; correct?
19:37:25 **15** **A.** They define anything that is an elongated
19:37:28 **16** structure and fibrous that if you care to write down
19:37:33 **17** your findings you could put it in.
19:37:35 **18** **Q.** So they define fibrous talc in that way?
19:37:37 **19** **A.** They define elongated fiber materials that
19:37:42 **20** you're going to -- if you wish to count into the TEM,
19:37:46 **21** any elongated structure.
19:37:48 **22** **Q.** Okay. And so it's your testimony that ISO
19:37:55 **23** 22262 was meant as a method to count fibrous talc?
19:38:01 **24** MR. CIRSCH: Object to form.
19:38:01 **25** THE WITNESS: I didn't say that.
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19:38:02 **1** **Q.** (By Mr. Chachkes) Is it a method to count
19:38:03 **2** fibrous talc? Is it meant as such as method?
19:38:06 **3** MR. CIRSCH: Object to form.
19:38:07 **4** THE WITNESS: I don't know what it was
19:38:08 **5** meant for, but it gives you the tools if you
19:38:10 **6** wish to do that. They don't restrict what you
19:38:13 **7** can or can't count. Nowhere in the method does
19:38:16 **8** it say don't count the fibrous talc.
19:38:19 **9** **Q.** (By Mr. Chachkes) And can you identify
19:38:26 **10** anywhere where there's a method and a peer-reviewed
19:38:30 **11** literature or peer-reviewed publication where it
19:38:34 **12** expressly refers to fibrous talc and a method to
19:38:36 **13** count fibrous talc?
19:38:38 **14** **A.** All the methods allow you to do that.
19:38:42 **15** **Q.** Yeah, I'm not asking about what methods
19:38:44 **16** allow you --
19:38:45 **17** **A.** You interrupted me.
19:38:46 **18** **Q.** Okay.
19:38:47 **19** **A.** It's late.
19:38:47 **20** All the methods give you the tools to do
19:38:49 **21** that if you wish. No method out there says do not
19:38:52 **22** count this particular type of structure. Just like
19:38:55 **23** in Blount, where she counted the particulates and
19:38:58 **24** tried to get a ratio of how many amphibole asbestos
19:39:01 **25** was for every number of particulates. The
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19:39:04 **1** information doesn't change because somebody doesn't
19:39:07 **2** say one way or the other if you should do it.
19:39:10 **3** **Q.** It's a simple question, if you would
19:39:12 **4** answer the question I'm actually asking, which is is
19:39:15 **5** there a published or peer-reviewed document that you
19:39:17 **6** can point me to that expressly talks about a way to
19:39:21 **7** count fibrous talc?
19:39:22 **8** MR. CIRSCH: Object to form.
19:39:23 **9** **Q.** (By Mr. Chachkes) Putting aside whether
19:39:25 **10** you can use some other method that doesn't say the
19:39:28 **11** phrase fibrous talc -- to count fibrous talc, is
19:39:30 **12** there something that expressly refers to fibrous talc
19:39:32 **13** and a method to count it?
19:39:34 **14** MR. CIRSCH: Object to form.
19:39:35 **15** THE WITNESS: I'd have to go back and
19:39:37 **16** relook. None of the methods say do not count
19:39:39 **17** fibrous talc.
19:39:41 **18** **Q.** (By Mr. Chachkes) Sitting here -- okay.
19:39:42 **19** MR. CIRSCH: Let him finish.
19:39:44 **20** THE WITNESS: None of the methods say do
19:39:46 **21** not count fibrous talc.
19:39:47 **22** **Q.** (By Mr. Chachkes) Yes, you said that many
19:39:49 **23** times. I'm --
19:39:49 **24** MR. CIRSCH: You're interrupting him
19:39:51 **25** again. Stop. Stop.
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19:39:52 **1** THE WITNESS: Let me start over. I lost
19:39:54 **2** my train of thought.
19:39:55 **3** None of the methods say do not count
19:39:57 **4** fibrous talc. The 7402 -- NIOSH 7402
19:40:01 **5** specifically says if it's fibrous talc, count
19:40:05 **6** it, in TEM. That's one. And I'll have to --
19:40:08 **7** **Q.** (By Mr. Chachkes) So --
19:40:10 **8** MR. CIRSCH: You keep interrupting him.
19:40:12 **9** MR. CHACHKES: I'm asking just to save --
19:40:12 **10** MS. O'DELL: No, you're interrupting him.
19:40:14 **11** MR. CIRSCH: You keep doing it, Alex.
19:40:16 **12** THE WITNESS: So that's one.
19:40:17 **13** **Q.** (By Mr. Chachkes) NIOSH?
19:40:18 **14** **A.** NIOSH 7402 TEM method, where you're
19:40:20 **15** determining the percentage of asbestos -- regulated
19:40:24 **16** asbestos defined by the counting rules versus other
19:40:27 **17** things, and it actually has talc in there.
19:40:30 **18** **Q.** Okay. So in there I can look, and it will
19:40:32 **19** say here's how you count fibrous talc?
19:40:35 **20** **A.** I don't think they put it that simply.
19:40:38 **21** But if you have knowledge about the protocols and
19:40:41 **22** read through it, you would understand.
19:40:43 **23** **Q.** Okay. Putting aside whether there are
19:40:46 **24** documents that don't expressly say you can't use them
19:40:50 **25** for this purpose, is there a document that says this
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19:40:53 **1** is how you count fibrous talc, using the phrase
19:40:56 **2** fibrous talc?
19:40:57 **3** **A.** They all say it because they say this is
19:40:59 **4** how you define a fiber. Then how you identify what
19:41:03 **5** that fiber is, you can make that decision. But every
19:41:06 **6** one of these TEM protocols say this is the definition
19:41:09 **7** of a fiber.
19:41:10 **8** **Q.** Putting aside protocols and publications
19:41:16 **9** that talk about fibers generally, and putting aside
19:41:18 **10** your continued insistence on talking about things
19:41:21 **11** that don't say something, is there something that
19:41:23 **12** actually says this is how you count fibrous talc,
19:41:27 **13** using the phrase fibrous talc?
19:41:29 **14** **MR. CIRSCH:** Object to form.
19:41:33 **15** **THE WITNESS:** It is my opinion that they
19:41:34 **16** all give you the tools to count fibrous talc.
19:41:37 **17** Do they actually say what every mineral --
19:41:39 **18** elongated particle mineral is that you should or
19:41:42 **19** should not count? I'd have to go back and
19:41:44 **20** check.
19:41:45 **21** I'm going to give you the same answer for
19:41:47 **22** the same question. They all provide you the
19:41:49 **23** tools or the counting procedures to count
19:41:53 **24** whatever elongated particle you want and
19:41:56 **25** identify it.

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19:41:56 **1** **Q.** (By Mr. Chachkes) So sitting here today,
19:41:57 **2** you can't tell me a counting protocol that expressly
19:42:01 **3** mentions this is how you count, mentioning the phrase
19:42:04 **4** fibrous talc?
19:42:06 **5** **MR. CIRSCH:** Object to form. He's
19:42:07 **6** answered the question. I instruct him not to
19:42:09 **7** answer any further.
19:42:11 **8** **MR. CHACHKES:** You're instructing him not
19:42:12 **9** to answer?
19:42:13 **10** **MR. CIRSCH:** He answered the question. I
19:42:13 **11** mean, you're badgering him now with the same
19:42:15 **12** question over and over again.
19:42:17 **13** **MR. CHACHKES:** I'm asking a different
19:42:17 **14** question.
19:42:17 **15** **MS. O'DELL:** Alex, I'm sure you're
19:42:19 **16** aware --
19:42:20 **17** **MR. CHACHKES:** Who's objecting here?
19:42:21 **18** **MS. O'DELL:** I'm objecting right here, and
19:42:22 **19** I'm sure you're aware --
19:42:22 **20** **MR. CHACHKES:** Okay. Can we just keep it
19:42:24 **21** to one person? It's a much more controlled
19:42:25 **22** environment when we do that.
19:42:25 **23** **MS. O'DELL:** Let me -- don't interrupt me.
19:42:26 **24** **MR. CHACHKES:** Okay. Wait. Which Lee is
19:42:26 **25** objecting?

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19:42:26 **1** **MS. O'DELL:** CMO 11, as you know, Alex,
19:42:32 **2** requires you to --
19:42:34 **3** **MR. CHACHKES:** I'm sorry, are you
19:42:35 **4** testifying about a document?
19:42:36 **5** **MS. O'DELL:** I'm telling you what the
19:42:37 **6** order says.
19:42:38 **7** **MR. CHACHKES:** Oh, okay. I'm sorry.
19:42:38 **8** **MS. O'DELL:** You may not be aware of the
19:42:39 **9** order since you've not appeared in the MDL, but
19:42:42 **10** it says to --
19:42:42 **11** **MR. CHACHKES:** Actually --
19:42:42 **12** **MS. O'DELL:** -- treat the witness with
19:42:44 **13** civility and respect.
19:42:46 **14** He's answered your question, and you
19:42:47 **15** should stop badgering him.
19:42:49 **16** **MR. CHACHKES:** Okay. Your objection's
19:42:51 **17** been made.
19:42:52 **18** **Q.** (By Mr. Chachkes) Are fibrous talc and
19:42:53 **19** asbestiform talc different?
19:42:55 **20** **A.** No.
19:42:59 **21** **Q.** In your report at page 30 you write that
19:43:03 **22** others have reported that fibrous talc is a
19:43:06 **23** geological metamorphic transformation of
19:43:09 **24** anthophyllite to fibrous talc?
19:43:11 **25** **A.** Yes.

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19:43:12 **1** **Q.** Okay. And then you cite a couple of
19:43:15 **2** things. There's an MVA report -- two MVA reports,
19:43:19 **3** right? You can go to page 30, footnotes 42, 43.
19:43:28 **4** **A.** It should be reference 30, Virta, The
19:43:44 **5** Phase Relationship of Talc and Amphiboles in a
19:43:47 **6** Fibrous Talc Sample, Bureau of Mines report is one.
19:43:50 **7** Veblen, 29, New Bio -- it's late -- I
19:43:56 **8** can't even pronounce it -- Biopyriboles, Chester,
19:44:00 **9** Vermont, talks about the polymorph transformation.
19:44:06 **10** That's how fibrous talc is generated --
19:44:08 **11** **Q.** Okay.
19:44:11 **12** **A.** -- is the -- during way back when, during
19:44:12 **13** pressure and temperature, when you had the liquid
19:44:16 **14** rock and -- depending on the minerals. Those are two
19:44:19 **15** references and there's others. I didn't put all of
19:44:19 **16** them in there.
19:44:19 **17** **Q.** Okay. Let's talk about two references you
19:44:21 **18** did put in. You put in two references to MVA
19:44:24 **19** reports, footnotes 42 and 43; correct?
19:44:55 **20** Am I correct that 42 and 43 --
19:44:58 **21** **A.** You are correct.
19:44:58 **22** **Q.** Okay. And those are reports prepared for
19:45:01 **23** plaintiffs in talc litigation?
19:45:05 **24** **MR. CIRSCH:** Object to form.
19:45:06 **25** **THE WITNESS:** That's my understanding.

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19:45:06 **1** Q. (By Mr. Chachkes) Okay. In your footnote
 19:45:09 **2** 42, you have the date of the MVA report as 2018, but
 19:45:14 **3** it was actually from 2017; correct?
 19:45:18 **4** A. That's correct.
 19:45:18 **5** Q. These MVA reports you cite in footnotes 42
 19:45:22 **6** and 43, those were not published; correct?
 19:45:24 **7** A. No, sir.
 19:45:25 **8** Q. And they're not peer-reviewed?
 19:45:27 **9** A. As far as I know, they haven't been
 19:45:30 **10** published.
 19:45:30 **11** Q. And they're not peer-reviewed, are they?
 19:45:33 **12** A. Well, if you're talking about
 19:45:34 **13** peer-reviewed in a publication, no.
 19:45:36 **14** Q. Okay. Is there another form of peer
 19:45:41 **15** review you're aware of?
 19:45:42 **16** A. Well, any time anybody looks over a report
 19:45:46 **17** and writes comments about it, it's peer-reviewed.
 19:45:49 **18** Q. So would you call your expert report in
 19:45:51 **19** this case peer-reviewed?
 19:45:53 **20** A. No, sir.
 19:45:55 **21** Q. Didn't Rigler look over it?
 19:45:58 **22** A. I'm talking about peer review where people
 19:46:00 **23** are looking for the scientific validity of it. It's
 19:46:05 **24** not -- as far as I know, the MVA talc analysis has
 19:46:09 **25** not been published.
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19:46:10 **1** Q. Okay. And as far as you know, you don't
 19:46:13 **2** have any information that it's been peer-reviewed?
 19:46:15 **3** MR. CIRSCH: Object to form.
 19:46:16 **4** THE WITNESS: You know, I'll give you
 19:46:17 **5** that. That's correct.
 19:46:17 **6** Q. (By Mr. Chachkes) What is MVA? What does
 19:46:21 **7** it stand for?
 19:46:22 **8** A. Millette, Vander Wood & Associates.
 19:46:24 **9** Q. And both of these reports were authored by
 19:46:27 **10** Dr. Steve Compton?
 19:46:28 **11** A. Yes, sir.
 19:46:28 **12** Q. And you've testified in cases with
 19:46:30 **13** Dr. Compton before; correct?
 19:46:31 **14** A. I understand he's been in the same cases
 19:46:33 **15** as me.
 19:46:34 **16** Q. On plaintiffs' side?
 19:46:35 **17** MR. CIRSCH: Object to form.
 19:46:36 **18** THE WITNESS: Yes, sir.
 19:46:36 **19** Q. (By Mr. Chachkes) Okay. He's also an
 19:46:38 **20** expert for plaintiffs' attorneys in asbestos
 19:46:40 **21** litigation?
 19:46:41 **22** A. He has.
 19:46:41 **23** Q. Describe how your analysts utilized
 19:46:49 **24** process blanks in their analysis.
 19:46:51 **25** A. Every set of samples that are prepared, a
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19:46:56 **1** process blank is prepared along with it so that
 19:46:59 **2** everything is done exactly the same except no talc.
 19:47:03 **3** And then those samples are run through the whole
 19:47:07 **4** preparation process, and then they are analyzed in
 19:47:09 **5** the same manner as the talc samples.
 19:47:13 **6** Q. Do your analysts run a process blank with
 19:47:16 **7** every single individual sample?
 19:47:17 **8** A. No. Every set of samples that are all
 19:47:20 **9** prepared at the same time.
 19:47:21 **10** Q. Okay. And so for the MDL samples, what
 19:47:24 **11** would constitute a set in that context?
 19:47:28 **12** A. Let me look, because Rigler can talk about
 19:47:48 **13** it more tomorrow.
 19:48:02 **14** So we have a number of blanks, and
 19:48:06 **15** typically we have a chart that shows which process
 19:48:12 **16** blanks go to which set of samples.
 19:48:22 **17** I'll see if Rigler can bring that
 19:48:23 **18** tomorrow.
 19:48:30 **19** I don't have that information. Typically
 19:48:32 **20** we give that.
 19:48:32 **21** Q. Why do you say Rigler can bring it
 19:48:36 **22** tomorrow? Was he involved in that process?
 19:48:38 **23** A. Well, he was involved putting this report
 19:48:40 **24** together. And since he's coming tomorrow, maybe he
 19:48:43 **25** can get in early enough to say which set of samples
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19:48:46 **1** were analyzed for each process blank.
 19:48:49 **2** Q. Sitting here today, even with the report
 19:48:51 **3** before you, you can't tell me that?
 19:48:53 **4** A. No, I don't see the chart that we have
 19:49:01 **5** prepared in the past.
 19:49:03 **6** Q. Do your analysts run a process blank with
 19:49:06 **7** every sample analyzed by PLM?
 19:49:08 **8** A. Well, you don't have anything that you're
 19:49:12 **9** generating. A process blank would literally be
 19:49:17 **10** putting the glass slide on the polarized light
 19:49:20 **11** microscope and looking at it because you're not
 19:49:20 **12** filtering anything, you're not using reagents, so
 19:49:24 **13** there's no such thing as a process blank in polarized
 19:49:27 **14** light microscopy.
 19:49:27 **15** Q. Okay. Does the ISO method provide a
 19:49:35 **16** process blank protocol?
 19:49:38 **17** A. I don't think so.
 19:49:39 **18** Q. Do you follow a process blank procedure
 19:49:42 **19** pursuant to your lab's standard protocols?
 19:49:44 **20** A. Yes.
 19:49:44 **21** Q. Is that written down somewhere?
 19:49:48 **22** A. I believe so.
 19:49:49 **23** Q. All right. We would request that be
 19:49:52 **24** produced.
 19:49:52 **25** Turning back to your TEM process blanks,
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19:49:55 **1** in your January 2019 report you write that, The
19:49:58 **2** process laboratory blanks were prepared in the exact
19:50:02 **3** manner as the talc samples but without any talc
19:50:04 **4** material.
19:50:05 **5** Does that sound familiar?
19:50:06 **6** **A.** It does.
19:50:06 **7** **Q.** Okay.
19:50:07 **8** **A.** I wrote it.
19:50:08 **9** **Q.** Was the first step in your process blank
19:50:10 **10** protocol centrifuging a centrifuge tube with just
19:50:15 **11** heavy liquid and no talc in it?
19:50:17 **12** **A.** Correct.
19:50:17 **13** **Q.** The first step of your process blank
19:50:19 **14** protocol test tests both -- does it test both the
19:50:25 **15** centrifuge tube and the heavy liquid for
19:50:27 **16** contamination?
19:50:28 **17** **A.** Well, since it's in the centrifuge tube,
19:50:31 **18** whatever it's touched would be -- you would be
19:50:33 **19** measuring that potential for contamination.
19:50:36 **20** **Q.** It follows that your process blank
19:50:39 **21** protocol did not include the portion of your method
19:50:41 **22** before centrifugation where you transferred the
19:50:44 **23** samples to a balance to be weighed?
19:50:46 **24** **A.** Since we're putting no talc in it, that's
19:50:49 **25** correct.
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19:50:49 **1** **Q.** If there was a contamination on the scale,
19:50:52 **2** that would not be accounted for in the process blank
19:50:54 **3** protocol; correct?
19:51:00 **4** **A.** If. Well, there's no evidence that
19:51:04 **5** there's an if in the scale. It's not just taken out
19:51:09 **6** and poured onto the scale. You use weigh paper.
19:51:13 **7** They're very careful about that.
19:51:16 **8** But there is -- so there's no
19:51:19 **9** contamination from the scale.
19:51:20 **10** **Q.** But it's fair to say the process blank
19:51:23 **11** protocol does not account for potential contamination
19:51:25 **12** on the scale, putting aside whether there's
19:51:27 **13** contamination or not?
19:51:28 **14** **A.** The process blank is everything that is
19:51:30 **15** touched: the liquid, the filtration, the filter, the
19:51:37 **16** centrifuge tube, the additional material, the
19:51:46 **17** apparatus that holds the filter, all that is checked.
19:51:50 **18** **Q.** My question's about what wasn't checked.
19:51:53 **19** Was the scale checked with the process blank
19:51:55 **20** protocol?
19:51:56 **21** **A.** You can't check the scale.
19:51:57 **22** **Q.** Okay. When you ran your process blanks,
19:52:00 **23** that process did not involve scraping samples out of
19:52:03 **24** the MCT tubes; right?
19:52:09 **25** **A.** Scraping samples out of the MC tube -- the
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19:52:19 **1** tube is cut with a guillotine. The centrifuge tube
19:52:24 **2** is cut with a guillotine. There's no scraping for
19:52:26 **3** the TEM.
19:52:27 **4** **Q.** When you ran your process blanks, the
19:52:30 **5** process did not involve taking material out of the
19:52:33 **6** MCT tubes; right?
19:52:35 **7** **A.** Sure, it did. It's the same way we take
19:52:38 **8** the material out when we do the TEM analysis for the
19:52:41 **9** process blanks. The end of the tube is cut where the
19:52:45 **10** heavy materials -- the heavy minerals are, and then
19:52:49 **11** it's run the exact same way.
19:52:51 **12** **Q.** Okay. So the process blank protocol did
19:52:52 **13** include the portion of your method where you scraped
19:52:54 **14** the centrifuge from the tube which is --
19:52:56 **15** **A.** It's not scraped.
19:52:57 **16** MR. CIRSCH: Object to form.
19:52:58 **17** THE WITNESS: There's no scraping.
18 **Q.** (By Mr. Chachkes) Okay.
19:53:00 **19** **A.** The tip is cut with a guillotine after
19:53:02 **20** it's been flash frozen in liquid nitrogen, and then
19:53:07 **21** that whole tip is put into a solution and then
19:53:08 **22** washed. There's no scraping.
19:53:09 **23** **Q.** I'll pick a more palatable verb.
19:53:13 **24** It follows that -- so you're saying your
19:53:14 **25** process blank protocol included the portion of your
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19:53:15 **1** method where you removed from the centrifuge the
19:53:22 **2** material with a spatula?
19:53:27 **3** **A.** There's no removing from the centrifuge
19:53:29 **4** tube after the spin-down with a spatula.
19:53:34 **5** **Q.** Do you just leave the material in the
19:53:36 **6** centrifuge?
19:53:36 **7** **A.** We cut the tip of -- the very bottom of
19:53:38 **8** the centrifuge tube off for TEM analysis, and then
19:53:41 **9** that whole tip is transferred inside and outside into
19:53:44 **10** the solution that is then going to be filtered where
19:53:47 **11** you dilute the heavy liquid density material, as we
19:53:50 **12** do with the TEM analysis.
19:53:53 **13** **Q.** What percentage of MAS's work is testing
19:53:55 **14** talc for asbestos?
19:53:56 **15** **A.** A lot.
19:54:02 **16** **Q.** Over 80 percent?
19:54:03 **17** **A.** I would say right now that our revenue is
19:54:06 **18** approximately 70 percent of talc analysis and
19:54:09 **19** everything associated with it.
19:54:10 **20** **Q.** Is the remaining --
19:54:12 **21** MR. CIRSCH: I don't know if he was --
19:54:13 **22** were you done?
19:54:13 **23** THE WITNESS: Yeah.
19:54:13 **24** **Q.** (By Mr. Chachkes) Is the remaining
19:54:15 **25** percentage primarily testing asbestos?
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19:54:19 **1** **A.** Very small percentage of that. Other
19:54:24 **2** stuff that we do.
19:54:24 **3** **Q.** I'm sorry.
19:54:26 **4** **A.** Other nonlitigation projects that we do.
19:54:29 **5** **Q.** Of the 30 percent of your work that isn't
19:54:33 **6** testing talc for asbestos, is that -- what's that
19:54:37 **7** 30 percent? What are you testing for?
19:54:38 **8** **A.** Well, we do -- like today, I mean, the
19:54:46 **9** analysts have around 100 regular, everyday PLM. It's
19:54:49 **10** testing for asbestos but not litigation related.
19:54:51 **11** **Q.** Okay. My question didn't really relate to
19:54:54 **12** litigation related or not.
19:54:56 **13** Of the percentage of your work that's not
19:54:57 **14** related to testing talc for asbestos, which is in the
19:55:01 **15** range of 30 percent, is it primarily testing other
19:55:03 **16** things for asbestos? Strike that. That was a
19:55:08 **17** terrible question.
19:55:08 **18** For the 30 percent of MAS's work that is
19:55:13 **19** not testing talc for asbestos, is that remainder
19:55:17 **20** primarily testing for asbestos in other materials or
19:55:21 **21** testing asbestos itself?
19:55:22 **22** **A.** Well, let me back up. All our litigation
19:55:24 **23** work is approximately 70 percent. I would say talc
19:55:29 **24** is approximately, of that 70 percent, maybe 35,
19:55:33 **25** 40 percent.
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19:55:35 **1** And then the other portion of that
19:55:38 **2** 70 percent would be other litigation, other asbestos
19:55:41 **3** testing, non-talc work. And then we have 30 or
19:55:45 **4** 35 percent nonasbestos work.
19:55:48 **5** Can we go off the record for a minute?
19:55:50 **6** MR. CHACHKES: Sure.
19:55:50 **7** (Off the record.)
19:56:09 **8** (Recess from 7:56 p.m. to 7:58 p.m.)
19:58:45 **9** **Q.** (By Mr. Chachkes) What was the
19:59:03 **10** approximate dates when MAS tested the samples that
19:59:05 **11** are discussed in your January 2019 report, from
19:59:09 **12** approximately what date to what date?
19:59:11 **13** **A.** You can look through the chain of
19:59:12 **14** custodies or look through the -- but I think it was
19:59:17 **15** like November, December, October, maybe.
19:59:21 **16** And I want to circle back for a second
19:59:26 **17** just to clarify. I misspoke earlier. The 70 percent
19:59:29 **18** is not talc litigation or talc testing. It's
19:59:33 **19** approximately 30, 35 percent of what we do. The
19:59:36 **20** remaining 30 percent is nonlitigation work. So I
19:59:41 **21** know I misspoke earlier.
19:59:42 **22** **Q.** Okay. Just to make sure the record's
19:59:46 **23** clear, so you're saying about 70 percent of your work
19:59:48 **24** is litigation related, about 30 is not?
19:59:50 **25** **A.** Correct.
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19:59:51 **1** **Q.** Okay. And of the 70 percent, roughly half
19:59:54 **2** of that is talc related, the other half is roughly
19:59:57 **3** asbestos litigation related?
19:59:59 **4** **A.** Correct.
19:59:59 **5** **Q.** Okay. And of the 30 percent that's not
20:00:02 **6** litigation related, what percentage of that is
20:00:06 **7** related to testing for asbestos in any context?
20:00:09 **8** **A.** Well, that would be encompassed in the
20:00:11 **9** 70 percent. So I haven't broken that out, but the
20:00:15 **10** other 30 percent is things like VOC testing for
20:00:18 **11** consumer reports or just materials analysis or
20:00:23 **12** projects.
20:00:25 **13** **Q.** Just -- what's VOC?
20:00:28 **14** **A.** Hmm?
20:00:28 **15** **Q.** I don't know what VOC is.
20:00:30 **16** **A.** Oh. Volatile organic compounds. It's
20:00:34 **17** green labeling, furniture testing, pharmaceutical
20:00:38 **18** work for our FDA certification -- not certification
20:00:41 **19** but our FDA lab number.
20:00:44 **20** **Q.** So --
20:00:46 **21** MR. CIRSCH: Were you done, Bill?
20:00:47 **22** THE WITNESS: Yes.
20:00:48 **23** **Q.** (By Mr. Chachkes) I recall that I had
20:00:49 **24** asked you a question about when you did the testing
20:00:51 **25** for the samples in your report, and you said
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20:00:54 **1** November, October, December?
20:00:56 **2** **A.** It's all in the reports. You can go
20:00:58 **3** through the chain of custodies, you can see the dates
20:01:01 **4** on the analysis.
20:01:01 **5** **Q.** And what year? 2018?
20:01:03 **6** **A.** Yes, sir.
20:01:03 **7** **Q.** And during that time frame were you
20:01:10 **8** testing other samples of talc for asbestos?
20:01:16 **9** **A.** Yes.
20:01:16 **10** **Q.** And during that time frame were you
20:01:18 **11** testing other materials, not talc, for asbestos?
20:01:23 **12** **A.** Yes.
20:01:23 **13** **Q.** In that time frame were you testing
20:01:25 **14** asbestos?
20:01:27 **15** **A.** Well, we were doing regular PLM for
20:01:32 **16** products for added -- that have asbestos added to it,
20:01:36 **17** such as chrysotile, typically see chrysotile most of
20:01:39 **18** the time, some amosite.
20:01:41 **19** **Q.** Okay. Any products that you were testing
20:01:43 **20** that have either tremolite or anthophyllite in them?
20:01:46 **21** **A.** Other than cosmetic talc, no.
20:01:49 **22** **Q.** How many TEMs does your lab have?
20:01:51 **23** **A.** Four.
20:01:52 **24** **Q.** Do you use all four at the same time?
20:01:57 **25** **A.** If four analysts are busy, yes.
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20:01:59 **1** Q. Are they all in the same room?
20:02:01 **2** A. No.
20:02:01 **3** Q. Are they each -- do they each have their
20:02:06 **4** own TEM room?
20:02:07 **5** A. Yes.
20:02:07 **6** Q. So in a given TEM room is it just the TEM
20:02:11 **7** there that's for testing?
20:02:13 **8** A. Correct.
20:02:14 **9** Q. There's no PLM or XRD in the TEM room?
20:02:21 **10** A. No.
20:02:21 **11** Q. Do you use the same PLMs for
20:02:27 **12** asbestos-containing material as you use for testing
20:02:29 **13** talc?
20:02:30 **14** A. No. We have a specific PLM scope that has
20:02:35 **15** been modified to enhance sensitivity.
20:02:39 **16** Q. So that PLM is only used for talc?
20:02:41 **17** A. Yes.
20:02:41 **18** Q. Are your talc samples handled in the same
20:02:46 **19** room as asbestos samples?
20:02:47 **20** A. No.
20:02:47 **21** Q. Does MAS have a clean room?
20:02:49 **22** A. We don't have a Class 100 clean room. We
20:02:54 **23** have a specific room set up just for cosmetic talc.
20:02:58 **24** Q. And what steps -- why haven't you
20:03:03 **25** constructed a clean room?
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20:03:06 **1** MR. CIRSCH: Object to form.
20:03:06 **2** THE WITNESS: Because there's no need to.
20:03:08 **3** If there's any work that is done on any of these
20:03:11 **4** materials, they're done in a biological hood so
20:03:17 **5** that if there's any escape of material, it can
20:03:22 **6** be filtered. We don't do a clean room.
20:03:24 **7** Q. (By Mr. Chachkes) Okay.
20:03:24 **8** A. It's a clean hood but not a clean room.
20:03:27 **9** Q. Okay. So your aliquot of a particular
20:03:32 **10** bottle for the purpose of doing a TEM test or whether
20:03:35 **11** it's a PLM test, that aliquot's taken out in a hood?
20:03:38 **12** A. Yes. Your experts have been to our lab
20:03:41 **13** and one will be there tomorrow. You can ask him what
20:03:44 **14** they see when they get there to get their aliquots.
20:03:47 **15** Q. Does MAS test -- strike that.
20:03:49 **16** Does the same analysts who test
20:03:54 **17** asbestos-containing material in your lab, do they
20:03:56 **18** also test for -- test talc for asbestos?
20:03:59 **19** A. No. The same analysts for PLM? I mean, I
20:04:05 **20** guess I need clarification of that question.
20:04:07 **21** Q. How about for TEM?
20:04:08 **22** A. TEM, if we have other samples that are
20:04:11 **23** being run, the same analyst will do that sample, too,
20:04:14 **24** in the TEM.
20:04:15 **25** Q. Do your analysts wear any sort of special
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20:04:18 **1** clothing when testing talcum powder samples for
20:04:21 **2** asbestos?
20:04:21 **3** A. No. They use special hoods. There is no
20:04:28 **4** danger of being exposed to asbestos in the talcum
20:04:33 **5** powder when you're pulling out TEM grids. It's
20:04:37 **6** trapped onto the TEM grids.
20:04:39 **7** There's never been, that I've heard of, of
20:04:41 **8** somebody getting exposed there. Everything is done
20:04:43 **9** in safety hoods. So none of our analysts are being
20:04:46 **10** exposed.
20:04:46 **11** Q. What was -- is it Dr. Rigler?
20:04:50 **12** A. Yes, it is.
20:04:51 **13** Q. What is Dr. Rigler's contribution to your
20:04:55 **14** expert report in this case?
20:04:56 **15** A. His contribution was to review it, to
20:05:00 **16** review all the data, to look at the data, make sure
20:05:04 **17** it's matched in the appropriate places. And he did
20:05:09 **18** the QA/QC report, so you can ask him tomorrow why he
20:05:13 **19** didn't put that one chart in. That's primarily it
20:05:16 **20** for this report.
20:05:17 **21** Q. When you say review the data, does that
20:05:20 **22** mean he reviewed it in the same substantive way that
20:05:24 **23** you did to make sure the analysts did their job?
20:05:26 **24** A. No. But he would review it that the data
20:05:29 **25** is there for the appropriate materials. But he
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20:05:34 **1** doesn't review it like I do.
20:05:36 **2** When I review the data, I review every
20:05:39 **3** sheet, every micrograph, every diffraction pattern so
20:05:44 **4** that I concur with the analysts' findings for the
20:05:48 **5** various tests that we've done.
20:05:50 **6** Q. So is it fair to say that his review is
20:05:55 **7** more sort of, let's say, a typo level and consistency
20:06:02 **8** level as opposed to substantive level?
20:06:05 **9** A. You'll have to ask him how much
20:06:07 **10** substantive level. But he was a TEM microscopist.
20:06:11 **11** He knows what the EDS pattern -- EDXA patterns look
20:06:17 **12** like and what they should be. He looks for the
20:06:20 **13** identification. But his -- but mine's more in depth
20:06:25 **14** on the data than his is.
20:06:27 **15** Q. Okay. Is he qualified to testify about
20:06:32 **16** how EDXA is -- EDSA -- EDXA is run?
20:06:37 **17** A. Sure.
20:06:37 **18** Q. Okay. And he's qualified to testify how
20:06:40 **19** PLM is run?
20:06:40 **20** A. He's not a PLM analyst. I don't know how
20:06:45 **21** much knowledge he has or if he could -- like I could,
20:06:49 **22** take me a while to sit down and actually analyze a
20:06:53 **23** PLM sample.
20:06:53 **24** Q. What about XRD, is he an expert in XRD?
20:07:06 **25** A. I don't believe so.
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20:07:07 **1** Q. Okay. What about SAED?
20:07:11 **2** A. Could he index a diffraction pattern by
20:07:16 **3** hand? You'll have to ask him.
20:07:18 **4** Q. Okay. Did he do any sort of substantive
20:07:20 **5** review of the SAED patterns?
20:07:23 **6** A. He knows the differences between talc
20:07:27 **7** patterns and anthophyllite type patterns, but that
20:07:30 **8** really was all my responsibility.
20:07:32 **9** Q. Okay. Does he have any responsibility for
20:07:36 **10** reviewing EDXA readouts?
20:07:40 **11** A. He did review them. He knows EDS spectras
20:07:45 **12** and the classic ratios of elements, silica to metals,
20:07:51 **13** that you would expect for these types of regulated
20:07:56 **14** asbestos fibers and bundles.
20:07:58 **15** Q. Is he qualified to testify to the same
20:08:05 **16** degree and substance as you regarding your January
20:08:08 **17** report?
20:08:09 **18** A. I don't know. I don't believe -- I don't
20:08:11 **19** believe he is as in-depth as I am on this January
20:08:15 **20** report with the data. I believe what his
20:08:19 **21** responsibility is, he can recognize the appropriate
20:08:22 **22** EDS patterns for the appropriate regulated asbestos.
20:08:26 **23** He's not a PLM analyst. He has reviewed -- he looks
20:08:31 **24** over, makes sure the materials are present, the
20:08:36 **25** QA/QC, the chains of custody, that sort of thing.
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20:08:38 **1** Q. Could he substitute for you as an expert
20:08:51 **2** in the case presenting this report?
20:08:54 **3** MR. CIRSCH: Object to form.
20:08:55 **4** THE WITNESS: I don't know.
20:08:57 **5** Q. (By Mr. Chachkes) That would be a
20:08:58 **6** question for him?
20:08:59 **7** A. You know, if I leave here and get hit by a
20:09:02 **8** bus, I guess we'll find out.
20:09:05 **9** Q. Would that be a question for him?
20:09:07 **10** A. Hoping that Dr. Longo get hits by a bus so
20:09:11 **11** he can step in and take my place?
20:09:12 **12** Q. Let's take the latter first.
20:09:14 **13** A. You'll have to ask him.
20:09:15 **14** Q. Okay. Why did you involve him?
20:09:21 **15** A. Because he's one of our senior scientists,
20:09:23 **16** and I involved him very early on. Dr. Rigler and I
20:09:27 **17** spent a lot of time collaborating together when we
20:09:32 **18** initially took on this project.
20:09:34 **19** And the main thing was we didn't feel it
20:09:36 **20** was the right thing to do to do the TEM long -- what
20:09:40 **21** I call the TEM long method, where to get some
20:09:44 **22** reasonable detection limits, you have to look at
20:09:46 **23** 500,000 grid openings. That ties up a TEM too long,
20:09:52 **24** and I just didn't think it was very efficient.
20:09:54 **25** We talked about the heavy liquid density
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20:09:56 **1** separation early on, that that was the way to go, the
20:09:59 **2** problems associated with it because of the density of
20:10:03 **3** anthophyllite without iron versus iron.
20:10:06 **4** Chrysotile issue, I'm sure we'll figure
20:10:09 **5** out together on how to extract chrysotile using the
20:10:13 **6** old Windsor method with citric acid. He's a very
20:10:18 **7** bright scientist.
20:10:19 **8** Q. You've issued reports on other bottles of
20:10:22 **9** J&J talc not in the MDL where he wasn't a coauthor of
20:10:25 **10** the report; correct?
20:10:26 **11** A. Is that right?
20:10:27 **12** Q. I'm asking.
20:10:28 **13** A. I think he's been on every report.
20:10:30 **14** MR. CHACHKES: Okay.
20:10:33 **15** I think I have no further questions, but
20:10:36 **16** there are other people, and I'm just going to
20:10:38 **17** maintain the objection I stated at the
20:10:39 **18** beginning, which is we'll have to review the
20:10:43 **19** enormous amount of data that was belatedly
20:10:45 **20** produced and determine whether to re-call the
20:10:46 **21** witness.
20:10:46 **22** MR. PROST: I'm happy to go now. I don't
20:10:50 **23** have much.
20:13:19 **24** (Off the record.)
20:13:19 **25** MR. CHACHKES: Just to amend what I said
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20:13:21 **1** before, I'm going to reserve time after the
20:13:23 **2** other defendant or defendants ask their
20:13:27 **3** questions, which will give me time to review my
20:13:33 **4** notes to see if I'm actually done.
20:13:35 **5** EXAMINATION
6 BY MR. PROST:
20:13:35 **7** Q. Hi, Dr. Longo.
20:13:35 **8** A. Good evening.
20:13:39 **9** Q. With respect to Dr. Rigler, did he subject
20:13:41 **10** any substantive changes?
20:13:43 **11** A. He might have.
20:13:44 **12** Q. You don't recall any as you sit here?
20:13:47 **13** A. No. I mean, we all have our own editing
20:13:51 **14** style. Sometimes he'd say this doesn't make any
20:13:52 **15** sense, which is not uncommon with my struggle with
20:13:56 **16** the English language.
20:13:57 **17** Q. Okay. You mentioned that you do not store
20:14:01 **18** talc and asbestos samples in the same room at MAS?
20:14:04 **19** A. Correct.
20:14:04 **20** Q. Do you store all of your talc samples in
20:14:08 **21** the same room regardless of the manufacturer or
20:14:12 **22** supplier?
20:14:13 **23** A. They are stored in the same room in
20:14:17 **24** separate containers, separate sealed bags, and
20:14:21 **25** separate locked cabinets.
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20:14:22 **1** Q. Are there other talc samples provided by
20:14:24 **2** other manufacturers or suppliers other than Johnson &
20:14:27 **3** Johnson?
20:14:27 **4** A. Yes.
20:14:28 **5** Q. How many others?
20:14:29 **6** A. A number.
20:14:32 **7** Q. More than five?
20:14:35 **8** A. I don't know.
20:14:37 **9** Q. And these samples span decades from these
20:14:41 **10** other manufacturers as to Johnson & Johnson?
20:14:44 **11** A. Typically.
20:14:44 **12** Q. With respect to fibrous talc, I think I
20:14:49 **13** heard you say this, but fibrous talc is not asbestos;
20:14:52 **14** right?
20:14:53 **15** MS. O'DELL: Object to form.
20:14:54 **16** THE WITNESS: It's not one of the
20:14:55 **17** regulated asbestos types.
20:14:56 **18** Q. (By Mr. Prost) And so no matter the shape
20:14:57 **19** or size or aspect ratio, if it's chemically talc,
20:15:01 **20** it's not asbestos?
20:15:02 **21** A. It is not one of the regulated asbestos
20:15:07 **22** types that we would report as asbestos.
20:15:09 **23** Q. You attempted to quantify the fibrous talc
20:15:13 **24** in your most recent January 15, 2019, report; is that
20:15:19 **25** right?
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20:15:19 **1** A. Yes.
20:15:19 **2** Q. And just describe briefly how you did
20:15:21 **3** that.
20:15:21 **4** A. It's very qualitative. The analyst for
20:15:25 **5** each of these samples going all the way back, they
20:15:28 **6** make an estimate of the number of particles they're
20:15:33 **7** seeing in the grid openings as they go through their
20:15:36 **8** 100 grid openings.
20:15:37 **9** At the end of that analysis, they'll state
20:15:39 **10** that I was typically seeing one or two or three, and
20:15:43 **11** then they'll record one of the typical asbestos talc
20:15:49 **12** fibers, diffraction pattern, EDS.
20:15:52 **13** So it's a qualitative estimate.
20:15:54 **14** Q. In your March 2018 report, did you attempt
20:15:59 **15** to quantify the fibrous talc?
20:16:01 **16** A. We collected the data, as I recall, but I
20:16:05 **17** didn't go through the exercise of just doing the
20:16:07 **18** math.
20:16:08 **19** Q. Why did you change your methodology in the
20:16:11 **20** quantification of fibrous talc between your
20:16:14 **21** March 2018 report and in your most recent report?
20:16:16 **22** MR. CIRSCH: Object to form.
20:16:17 **23** THE WITNESS: I became curious on how much
20:16:20 **24** fibrous talc is in the samples where we're
20:16:22 **25** seeing fibrous talc. Some samples we see it,
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20:16:25 **1** some we don't, especially by TEM. PLM, it's
20:16:29 **2** just about in every sample.
20:16:32 **3** With the heavy liquid density separation,
20:16:35 **4** you know, theoretically, you should be removing
20:16:37 **5** all the fibrous talc along with the platy talc,
20:16:40 **6** but there is some fibers in there.
20:16:42 **7** A true quantitative analysis where -- is
20:16:45 **8** to take any of these samples that have fibrous
20:16:48 **9** talc in and do a regular no heavy liquid density
20:16:53 **10** separation and see how many orders of magnitude
20:16:56 **11** the fibrous talc is compared to what we're
20:16:59 **12** seeing in TEM with the heavy density liquid
20:17:02 **13** separation.
20:17:02 **14** Q. (By Mr. Prost) On page 13 of your
20:17:04 **15** January 2019 report, you quantify it as abundant,
20:17:10 **16** common, or trace; is that right?
20:17:11 **17** A. Yes.
20:17:12 **18** Q. And is there any published or
20:17:16 **19** peer-reviewed literature that guided those
20:17:19 **20** categories, or is that something that you or MAS came
20:17:21 **21** up with?
20:17:22 **22** A. It was our collective -- what would you
20:17:26 **23** say is trace, how do we kind of give some information
20:17:28 **24** about it, because that's what we were doing for a
20:17:31 **25** while.
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20:17:33 **1** Now we're just using the trace as it's one
20:17:37 **2** to three, on average, per opening. And to do the
20:17:41 **3** analysis or do the semiquantitative estimation of the
20:17:45 **4** number of fibrous talc structures per gram, we just
20:17:49 **5** use one per grid opening.
20:17:51 **6** Q. So there is no established standard for
20:17:54 **7** those three categories that you relied upon?
20:17:59 **8** MS. O'DELL: Object to the form.
20:18:00 **9** THE WITNESS: I don't think I've seen a
20:18:02 **10** document that says if you see fibrous talc, if
20:18:04 **11** you only have one or two particles, that it's
20:18:06 **12** trace. And it's not -- it's trace compared to
20:18:08 **13** what you're seeing there so that you can give
20:18:10 **14** some qualitative estimate.
20:18:14 **15** And we were using this before I got the
20:18:17 **16** idea of actually doing a qualitative count based
20:18:21 **17** on one fibrous talc structure per opening.
20:18:27 **18** Q. (By Mr. Prost) Have you done any quality
20:18:29 **19** assurance reports for fibrous talc?
20:18:32 **20** A. No, sir.
20:18:33 **21** Q. And how long have you been analyzing
20:18:43 **22** materials for asbestos content? When is the first
20:18:46 **23** time you did that? How many years ago?
20:18:48 **24** A. The first TEM grids that I ever analyzed
20:18:53 **25** are in a -- stuck on a petri dish and I have it on
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20:18:58 **1** the wall. I think it was about approximately 1985 or
20:19:02 **2** 1986.
20:19:03 **3 Q.** Is the first time that you ever documented
20:19:05 **4** fibrous talc 2018?
20:19:07 **5 A.** No. I used to do a lot of product ID in
20:19:17 **6** the property damage cases, and one of the
20:19:20 **7** fingerprints for U.S. Gypsum Audicote Acoustical
20:19:26 **8** Plaster was that it had approximately 10 percent
20:19:29 **9** International Talc in it. And International Talc,
20:19:34 **10** obviously, eventually is Vanderbilt Talc when they
20:19:37 **11** bought that. And it was a fibrous talc component, so
20:19:40 **12** we were constantly analyzing for fibrous talc.
20:19:43 **13** Because U.S. Gypsum Audicote was the only
20:19:47 **14** acoustical plaster out there that had a combination
20:19:49 **15** of 10 percent perlite -- excuse me -- 10 percent
20:19:53 **16** chrysotile, 60 percent perlite, approximately
20:19:57 **17** 10 percent fibrous talc, and the rest of it was
20:20:02 **18** bentonite clay, Wyoming type, and then a few
20:20:06 **19** percentages, 2 or 3 percent of calcium carbonate.
20:20:09 **20** That fibrous talc was the fingerprint for
20:20:12 **21** that product. So we spent a lot of time in these
20:20:15 **22** types of situations debating fibrous talc.
20:20:20 **23** And I must have done that -- and that was
20:20:22 **24** when I was doing all the TEM analysis on the product
20:20:25 **25** ID. I bet I analyzed hundreds and hundreds and
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20:20:28 **1** hundreds of samples specifically, besides looking for
20:20:31 **2** the other primary ingredients, is looking at and
20:20:34 **3** making sure if it was U.S. Gypsum Audicote versus
20:20:38 **4** National Gypsum spray -- God, I've forgotten the
20:20:44 **5** name -- or one of the other without the fibrous talc.
20:20:47 **6 Q.** That was all industrial talc?
20:20:50 **7 A.** Yes.
20:20:50 **8 Q.** So the first time you would have
20:20:53 **9** documented the presence of fibrous talc in cosmetic
20:20:56 **10** talc, would that have been 2018?
20:20:58 **11 A.** Whenever we first started doing these
20:21:00 **12** analyses. I think that was November, December,
20:21:05 **13** January, or so, in early 2018.
20:21:08 **14 Q.** I know you're not giving any medical
20:21:11 **15** causation opinions with respect to disease or ovarian
20:21:18 **16** cancer, am I also correct you're not going to offer
20:21:19 **17** any opinions as to the root of exposure, whether it
20:21:23 **18** be the female reproductive tract versus inhalation;
20:21:23 **19** is that correct?
20:21:23 **20 A.** That is correct. I will not be giving
20:21:26 **21** those types of opinions.
20:21:27 **22 Q.** You've never been to a talc mine?
20:21:30 **23 A.** I still haven't.
20:21:30 **24 Q.** You've not studied the geology of the
20:21:34 **25** mines in Vermont or China, have you?
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20:21:37 **1** MR. CIRSCH: Object to form.
20:21:38 **2** THE WITNESS: I am not a geologist. My
20:21:40 **3** role is what's in the bottle.
20:21:41 **4 Q.** (By Mr. Prost) Do you agree that the
20:21:44 **5** geologic process that controls the formation of any
20:21:47 **6** given talc deposits are unique?
20:21:49 **7** MS. O'DELL: Object to the form.
20:21:50 **8** THE WITNESS: I'm not a geologist. I
20:21:52 **9** don't know how unique, especially for the
20:21:56 **10** Vermont and Italian mines. We see from those
20:22:01 **11** time periods that they have asbestos.
20:22:02 **12** So I'll let other geologists say how
20:22:05 **13** unique or not unique they are. That's not my
20:22:07 **14** area.
20:22:07 **15 Q.** (By Mr. Prost) You would expect the
20:22:09 **16** accessory minerals in any given talc deposit to be
20:22:12 **17** different from one continent to another, wouldn't
20:22:15 **18** you?
20:22:15 **19** MR. CIRSCH: Object to form.
20:22:16 **20** THE WITNESS: I don't have an expectation
20:22:18 **21** one way or the other.
20:22:18 **22 Q.** (By Mr. Prost) You can't name for me the
20:22:21 **23** mines in Vermont that would have been sourced for J&J
20:22:24 **24** baby powder, can you?
20:22:26 **25 A.** Besides Hammondsville, Argonaut, and
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20:22:30 **1** what's the other one? I'm missing one.
20:22:32 **2 Q.** You're not able to break down the samples
20:22:36 **3** that you've tested in your reports pertaining to any
20:22:40 **4** specific mine in Vermont or a year, are you?
20:22:42 **5 A.** Without going through all the documents
20:22:44 **6** showing that when you switched from Hammonds -- or
20:22:49 **7** Argonaut, there's specific years in discovery, but I
20:22:50 **8** haven't bothered doing -- I haven't done that, if
20:22:54 **9** it's important.
20:22:54 **10 Q.** All right. Do you know when Imerys began
20:22:57 **11** supplying talc for Johnson & Johnson Baby Powder?
20:23:00 **12 A.** It's always unclear to me. Of course,
20:23:07 **13** it's the -- in 1980 we have some -- maybe with the
20:23:12 **14** Vermont and the later '80s.
20:23:17 **15** I haven't memorized -- and because we've
20:23:21 **16** been going so long, I'm tired. I've had that
20:23:24 **17** information at the tip of my tongue before, but I
20:23:26 **18** would have to look it back up what Imerys says in
20:23:30 **19** their sworn interrogatories when they started doing
20:23:32 **20** that, as well as Johnson & Johnson when they say they
20:23:34 **21** started buying it versus when it was their own mine
20:23:37 **22** and that sort of thing.
20:23:38 **23 Q.** Are you familiar or knowledgeable
20:23:40 **24** regarding the selective mining processes that Imerys
20:23:44 **25** would have used?
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20:23:45 **1** **A.** Is that like the video where they were
20:23:47 **2** blowing it up?
20:23:50 **3** I'm not here to talk about selective
20:23:52 **4** mining processes or not. My role is just an analysis
20:23:57 **5** of what's in these particular containers.
20:24:01 **6** **Q.** You're not familiar or knowledgeable
20:24:03 **7** regarding the flotation process that Imerys used over
20:24:06 **8** the years, are you?
20:24:07 **9** **A.** I've read a lot about it. In fact, we're
20:24:09 **10** going to use one, I believe, with the citric acid to
20:24:13 **11** try to concentrate the chrysotile if present.
20:24:17 **12** So without looking at it and going through
20:24:21 **13** the processes that have been stated in a lot of the
20:24:25 **14** documents I've read, other than that, no.
20:24:27 **15** **Q.** Are you aware of any published literature
20:24:31 **16** stating that any of the mines used to source
20:24:35 **17** Johnson & Johnson Baby Powder were contaminated with
20:24:38 **18** asbestos or amphibole asbestos?
20:24:40 **19** **A.** Published literature versus in-house
20:24:44 **20** testing and company's own stuff?
20:24:47 **21** **Q.** Say peer-reviewed literature.
20:24:49 **22** **A.** I'm sorry, could you repeat that?
20:24:52 **23** **Q.** Are you aware of any peer-reviewed
20:24:54 **24** literature stating that any of the mines used to
20:24:56 **25** source Johnson & Johnson's Baby Powder or Shower to
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20:24:59 **1** Shower were contaminated with amphibole asbestos or
20:25:02 **2** chrysotile?
20:25:03 **3** MS. O'DELL: Object to the form.
20:25:04 **4** THE WITNESS: I mean, the geological
20:25:06 **5** reports that go back and -- and Alice Blount can
20:25:10 **6** pick on -- Alice Blount didn't say that this
20:25:13 **7** came from Vermont. I assume she knows where, as
20:25:15 **8** a geologist, as a consultant, where that talc
20:25:18 **9** came for that 1989 or that 1990 bottle of
20:25:22 **10** Johnson's Baby Powder that she tested to show
20:25:25 **11** tremolite asbestos.
20:25:27 **12** But an actual peer-reviewed publication
20:25:30 **13** stating that the accessory minerals are asbestos
20:25:33 **14** type or regulated asbestos as counted by these
20:25:41 **15** standard peer-reviewed protocols, I can't think
20:25:45 **16** of any.
20:25:46 **17** **Q.** (By Mr. Prost) Have you read Alice
20:25:48 **18** Blount's deposition transcript from the Ingham case?
20:25:50 **19** **A.** I have.
20:25:51 **20** **Q.** And is it your belief from reading that
20:25:55 **21** testimony that she's saying that sample I from her
20:25:59 **22** 1990 report was a bottle of Johnson & Johnson Baby
20:26:03 **23** Powder?
20:26:03 **24** **A.** She says it is.
20:26:03 **25** **Q.** Did you read where she said she bought
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20:26:06 **1** that bottle in 1996?
20:26:10 **2** MR. CIRSCH: Object to form.
20:26:11 **3** THE WITNESS: Well, that would have been
20:26:12 **4** hard to go back in time with it. I think she
20:26:14 **5** also testified that she bought a number of
20:26:16 **6** bottles over the years.
20:26:17 **7** **Q.** (By Mr. Prost) You would agree she was a
20:26:19 **8** bit confused in her deposition?
20:26:21 **9** MR. CIRSCH: Object to form.
20:26:21 **10** THE WITNESS: No, sir, I don't make that
20:26:23 **11** judgment about anybody.
20:26:24 **12** **Q.** (By Mr. Prost) I've heard it read and
20:26:30 **13** think you've probably been asked this before, but
20:26:32 **14** would you agree that less than 1 percent of the
20:26:35 **15** amphiboles in the world are asbestiform?
20:26:39 **16** MR. CIRSCH: Object to form.
20:26:40 **17** THE WITNESS: You know, I just don't know
20:26:51 **18** what 1 percent of probably, I don't know, how
20:26:54 **19** many zero tons of amphibole's out there.
20:26:57 **20** Sometimes people seem to suggest that 1 percent
20:27:00 **21** isn't very much. 1 percent of something really
20:27:02 **22** big tends to be a lot.
20:27:04 **23** **Q.** (By Mr. Prost) You're familiar with
20:27:05 **24** peer-reviewed studies, though, that have said that;
25 right?
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20:27:09 **1** **A.** Yes, sir.
20:27:09 **2** **Q.** And you don't have reason to disagree with
20:27:11 **3** that, do you?
20:27:13 **4** **A.** No, sir. I'm just curious on if you were
20:27:15 **5** to take every amphibole mineral in the world and then
20:27:18 **6** say only 1 percent of that is asbestos. There
20:27:22 **7** certainly seems to be enough amphibole asbestos in
20:27:25 **8** the world to supply a very large contingent of
20:27:29 **9** products over the years until it got all banned or no
20:27:33 **10** longer made for amphiboles.
20:27:34 **11** So I don't have any -- I can't give you a
20:27:36 **12** relationship what 1 percent means. It's not
20:27:40 **13** 1 percent of a pound. It's 1 percent of -- I don't
20:27:43 **14** know how many -- how you would weigh it all.
20:27:47 **15** **Q.** I know you might think it's still a lot,
20:27:50 **16** but you have no reason to disagree with the
20:27:52 **17** peer-reviewed literature that you've seen that has
20:27:54 **18** said that less than 1 percent of the amphiboles in
20:28:00 **19** the earth's crust is asbestiform?
20:28:04 **20** **A.** No, sir. I just was curious how much of
20:28:06 **21** the crust is made up of the percentage of what the
20:28:10 **22** weight is.
20:28:11 **23** **Q.** I think I've seen you testify before --
20:28:13 **24** and I want to see if you still agree -- if an
20:28:16 **25** amphibole is crystallized in a nonasbestiform habit,
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20:28:22 **1** no matter how much you can grind it up, it can never
 20:28:26 **2** turn into asbestos or asbestiform?
 20:28:29 **3** MR. CIRSCH: Object to form.
 20:28:30 **4** THE WITNESS: It's unclear to me what an
 20:28:33 **5** nonasbestiform habit is other than you may have
 20:28:36 **6** massive, blocky. It's all a geological shape.
 20:28:39 **7** If you grind up a rock, you do not produce
 20:28:44 **8** asbestos. If you grind up tremolitic -- massive
 20:28:50 **9** tremolitic, you typically will get both, but you
 20:28:53 **10** will not get bundles.
 20:28:55 **11** What we do is count it as regulated
 20:28:58 **12** asbestos per the protocols.
 20:29:01 **13** Q. (By Mr. Prost) Right. So if it
 20:29:03 **14** crystallizes in a nonasbestiform habit, tremolite,
 20:29:06 **15** for example, and you grind it up and it falls under
 20:29:09 **16** the counting rules you use, you call it asbestiform,
 20:29:12 **17** regardless; right?
 20:29:14 **18** MR. CIRSCH: Object to form.
 20:29:15 **19** THE WITNESS: Well, everything we've
 20:29:17 **20** looked at has crystallized in a fibrous habit.
 20:29:20 **21** Asbestiform habit and fibrous habit are the same
 20:29:23 **22** thing because we're looking at fibers.
 20:29:25 **23** If you look at all the crystalline habits,
 20:29:27 **24** there's a wide range, and most of them are not
 20:29:29 **25** fibrous, only one where they would call fibrous.
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20:30:42 **1** fibrous, in your opinion, is it necessarily
 20:30:44 **2** asbestiform?
 20:30:47 **3** A. In my opinion, if it is fibrous, it is
 20:30:49 **4** asbestiform because it has a form like asbestos.
 20:30:52 **5** Q. Are you aware of any peer-reviewed studies
 20:30:55 **6** to support that?
 20:30:59 **7** A. Other than --
 20:31:00 **8** Q. I'm sorry, that if an amphibole is
 20:31:02 **9** fibrous, it necessarily has to be asbestiform?
 20:31:06 **10** A. You know, other than the geological
 20:31:09 **11** definition for a crystalline habit and that it is
 20:31:12 **12** fibrous and, you know, whatever the population is,
 20:31:16 **13** population is more than one.
 20:31:18 **14** But we're getting enough data now that
 20:31:20 **15** these populations -- and you just can't -- you know,
 20:31:25 **16** no longer look at from a sample from the same mine
 20:31:30 **17** that it's a unique thing.
 20:31:31 **18** All the samples from the mine that we're
 20:31:33 **19** seeing over and over again show asbestiform minerals
 20:31:37 **20** in it, specifically tremolite series and the
 20:31:39 **21** anthophyllite series.
 20:31:42 **22** It's just my opinion. I mean, others may
 20:31:44 **23** disagree, but that's my opinion.
 20:31:45 **24** Q. Is there a specific article or
 20:31:48 **25** peer-reviewed literature or study that says if you
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20:29:33 **1** But you're not going to get an asbestiform
 20:29:36 **2** bundle from grinding up cleavage fragments.
 20:29:40 **3** Q. (By Mr. Prost) I'm not talking about what
 20:29:42 **4** you've seen or looked at or issued in your report;
 20:29:44 **5** but just hypothetically, if you have nonasbestiform
 20:29:47 **6** tremolite or amphibole that's crystallized in a
 20:29:50 **7** nonasbestiform habit, no matter -- if someone were to
 20:29:54 **8** grind that up so that the shape came out to be, under
 20:29:58 **9** the counting rules that you go by, you would still
 20:30:00 **10** call that asbestiform?
 20:30:03 **11** MR. CIRSCH: Object to form.
 20:30:04 **12** THE WITNESS: Well, it's a hypothetical I
 20:30:05 **13** don't believe exists. If you grind up a rock or
 20:30:08 **14** something that's massive, you get little pieces,
 20:30:10 **15** irregular shapes. To get a perfectly parallel
 20:30:15 **16** side I think is rare.
 20:30:17 **17** And you have to look at what else we're
 20:30:20 **18** seeing here. Every bundle is asbestiform. And
 20:30:25 **19** you would think you would have the same type of
 20:30:27 **20** crystalline habit that is generating both
 20:30:31 **21** asbestiform as well as some cleavage fragments.
 20:30:34 **22** We do see cleavage fragments. But it's my
 20:30:38 **23** belief you get both. It's never one or the
 20:30:40 **24** other.
 20:30:40 **25** Q. (By Mr. Prost) If an amphibole is
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20:31:50 **1** have an amphibole and it's in a fibrous form, that it
 20:31:53 **2** is necessarily asbestos or asbestiform?
 20:31:57 **3** MR. CIRSCH: Object to form.
 20:31:58 **4** THE WITNESS: Every protocol that we're
 20:31:59 **5** using here has a definition of what you call a
 20:32:01 **6** regulated asbestos. Everything that I have
 20:32:04 **7** reported has followed the peer-reviewed
 20:32:06 **8** protocols and methods to say it is a regulated
 20:32:09 **9** asbestos that is fibrous to whatever degree they
 20:32:12 **10** use for their counting rules. In my opinion,
 20:32:14 **11** that makes it all asbestiform.
 20:32:15 **12** Q. (By Mr. Prost) So the counting rules and
 20:32:16 **13** the protocols that you used for your reports are what
 20:32:22 **14** you're talking about?
 20:32:22 **15** A. Yes, sir.
 20:32:23 **16** Q. No other articles or papers that you can
 20:32:26 **17** think of?
 20:32:26 **18** A. Not as I sit here this second, no.
 20:32:28 **19** Q. Are you aware of any peer-reviewed
 20:32:30 **20** articles or literature that say the opposite, that
 20:32:32 **21** you can have fibrous amphiboles that are not
 20:32:35 **22** asbestiform?
 20:32:37 **23** A. There's a couple.
 20:32:39 **24** MS. O'DELL: Object.
 20:32:40 **25** Q. (By Mr. Prost) And who would those be
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20:32:41 **1** from?

20:32:41 **2** **A.** Oh, I think Ann Wylie has published one or

20:32:44 **3** two. Just depends on who the authors are.

20:32:48 **4** **Q.** And you just disagree with that?

20:32:50 **5** **A.** Well, I don't agree with their opinions

20:32:52 **6** that if it is a bundle. But I disagree that if you

20:32:56 **7** take an individual fiber that you can't tell one way

20:32:59 **8** or the other because it has the same chemistry, it

20:33:03 **9** has the same crystalline pattern, it has the same

20:33:07 **10** surface charge, and it's called a regulated asbestos

20:33:10 **11** fiber, if it meets all that counting criteria. In my

20:33:15 **12** opinion, if it is fibrous and it is asbestos, it is

20:33:19 **13** asbestiform.

20:33:20 **14** **Q.** I know you think that or you testified

20:33:23 **15** that high tensile strength and flexibility don't mean

20:33:26 **16** much because they can't be measured, I think; is that

20:33:29 **17** a fair way of describing what you've said or what

20:33:32 **18** your opinion is?

20:33:33 **19** **A.** Well, it's not defined. And both the

20:33:36 **20** polarized light microscope as well as the

20:33:39 **21** transmission electron microscope do not have any

20:33:43 **22** ability to make those measurements. It's just a

20:33:45 **23** general description.

20:33:47 **24** **Q.** Wouldn't you agree that there's ways to

20:33:50 **25** observe whether something has high tensile strength

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20:33:53 **1** and flexibility?

20:33:54 **2** **A.** Sure. If you go to the mine and get a --

20:33:57 **3** I think a 10 centimeter sample is the minimum, and

20:34:00 **4** tape it to paper and go put it on an Instron, which

20:34:03 **5** is a device that will measure tensile strength, I

20:34:07 **6** wouldn't want to be standing around when you do it.

20:34:10 **7** Because when they pop, they'll spread fibers

20:34:14 **8** everywhere because you're just dealing with large

20:34:17 **9** bundles.

20:34:17 **10** With a transmission electron microscope,

20:34:19 **11** with a polarized light microscope, or even XRD, it's

20:34:22 **12** impossible. There is no ability to make that

20:34:25 **13** measurement. And standard protocols for making

20:34:29 **14** determinations or measurements lay out how you do

20:34:31 **15** that. They don't even define what high tensile

20:34:35 **16** strength is.

20:34:36 **17** **Q.** Under PLM, is it your opinion that --

20:34:40 **18** sounds like it is your opinion -- it is impossible to

20:34:43 **19** make a determination whether a population of fibers

20:34:48 **20** or a bundle has high tensile strength or flexibility?

20:34:52 **21** **A.** It is impossible. And they don't provide

20:34:56 **22** you any method for doing that.

20:34:57 **23** **Q.** In terms of curvature, splayed ends,

20:35:03 **24** parallel sides, that sort of thing, you don't think

20:35:04 **25** that gives any guidance on the observance of high

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20:35:08 **1** tensile strength and flexibility?

20:35:09 **2** **MR. CIRSCH:** Object to form.

20:35:10 **3** **THE WITNESS:** No. You know, if you're

20:35:13 **4** going to look at the published literature for

20:35:14 **5** high tensile strength for chrysotile, amosite,

20:35:18 **6** and crocidolite, you're running around 90,000 to

20:35:21 **7** 120,000 psi.

20:35:22 **8** If you look at what the characteristics or

20:35:25 **9** tensile strength is for tremolite anthophyllite,

20:35:27 **10** it's about 4,000 psi, and it's brittle. And

20:35:31 **11** you're milling it.

20:35:32 **12** So if you can see the bundles at times

20:35:35 **13** that we get, you can see where it has been

20:35:38 **14** milled and broken in half. There's nothing

20:35:41 **15** there to do that.

20:35:42 **16** When we identify regulated asbestos in the

20:35:45 **17** PLM method, it meets the criteria for what they

20:35:49 **18** say is regulated. It has -- those individual

20:35:52 **19** fibers and those bundles are all greater,

20:35:55 **20** typically, on average, greater than 20-to-1.

20:35:58 **21** They can be broken down to smaller fibers

20:36:00 **22** and bundles. It's greater than -- the width of

20:36:04 **23** the structure is greater than 5 micrometers. It

20:36:07 **24** meets the criteria for the ISO 22262-2.

20:36:11 **25** Nowhere in any of that method does it tell

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20:36:14 **1** you, oh, you better measure the tensile

20:36:17 **2** strength.

20:36:17 **3** **Q.** (By Mr. Prost) The 34 or 35 samples from

20:36:21 **4** your March 2018 report, you're still relying upon the

20:36:25 **5** results of that report here in the MDL; is that

20:36:29 **6** right?

20:36:29 **7** **A.** No, I'm not. I'm relying on the MDL

20:36:32 **8** report. The only thing that the MDL does is verify

20:36:36 **9** our earlier findings, but I'm not relying on it here.

20:36:38 **10** **Q.** Well, your MDL report includes the

20:36:40 **11** findings of positive of what you're calling asbestos,

20:36:44 **12** though, in those -- in terms of your computations of

20:36:47 **13** the percentages?

20:36:47 **14** **A.** I'm sorry, could you repeat that?

20:36:49 **15** **Q.** Sorry, it was -- yeah, clumsy.

20:36:51 **16** In your January 2019 MDL report, you're

20:36:54 **17** including the findings of those original Johnson &

20:36:58 **18** Johnson samples, those 35 in your overall

20:37:01 **19** percentages, aren't you?

20:37:02 **20** **A.** No. The only thing that's in there that

20:37:04 **21** came from the original report is that MDL sample, the

20:37:10 **22** 1978 MDL sample. That's the only sample.

20:37:15 **23** **Q.** You changed your methodology from the

20:37:19 **24** March 2018 report until now. Why did you do that?

20:37:22 **25** **MR. CIRSCH:** Object to form.

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20:37:23 **1** THE WITNESS: Because we -- we didn't
 20:37:27 **2** really change it. We just started using the
 20:37:31 **3** definitions and the ability for the ISO 22262-2
 20:37:35 **4** because it's an International Standard that has
 20:37:37 **5** been peer-reviewed by all the international
 20:37:41 **6** scientists that are on it or in the committees,
 20:37:44 **7** and it provides a standard method other than
 20:37:47 **8** just the Blount heavy density liquid separation
 20:37:50 **9** and TEM.
 20:37:51 **10** **Q.** (By Mr. Prost) Is the method you're doing
 20:37:53 **11** now more reliable than what you did last year?
 20:37:55 **12** **A.** No.
 20:37:56 **13** **MR. CIRSCH:** Object to form.
 20:37:56 **14** **THE WITNESS:** They are both reliable.
 20:37:59 **15** **Q.** (By Mr. Prost) Is your concentration
 20:38:02 **16** preparation any different now than what you did in
 20:38:07 **17** early 2018, that first report?
 20:38:10 **18** **A.** No. We are using the exact same method,
 20:38:16 **19** except the ISO 22262-2 says use heavy density liquid
 20:38:22 **20** of 2.85, if I remember, and Blount had said 2.81.
 20:38:30 **21** So now I have a method that specifically
 20:38:32 **22** uses 2.85 that we have been using under Blount.
 20:38:37 **23** **Q.** For the Johnson & Johnson MDL samples, I
 20:38:43 **24** think you testified that some of those containers had
 20:38:48 **25** been previously opened?
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20:38:51 **1** **MS. O'DELL:** Object to the form.
 20:38:53 **2** **THE WITNESS:** Well, they got previously
 20:38:55 **3** opened when they were split. I don't have any
 20:38:59 **4** history on what Johnson & Johnson did with
 20:39:03 **5** those, but certainly when they got split up in
 20:39:06 **6** New Jersey for samples, they were opened in some
 20:39:10 **7** manner.
 20:39:10 **8** **Q.** (By Mr. Prost) The Imerys samples, the
 20:39:12 **9** railcar samples, I haven't seen any photographs of
 20:39:16 **10** those, and I think when we talked last time you said
 20:39:19 **11** you could produce those?
 20:39:20 **12** **A.** Oh, I forgot. Yes.
 20:39:21 **13** **Q.** You do have photos of those somewhere that
 20:39:23 **14** you can produce them?
 20:39:23 **15** **A.** Yes. It should -- I'll endeavor to get
 20:39:27 **16** those.
 20:39:27 **17** **Q.** All right. I guess we'll ask that those
 20:39:30 **18** be produced.
 20:39:30 **19** You're not familiar with how Imerys stored
 20:39:35 **20** those samples before they were produced; right?
 20:39:38 **21** **A.** No.
 20:39:38 **22** **Q.** Or what specific mines they came out of?
 20:39:42 **23** **MS. O'DELL:** Object to the form.
 20:39:43 **24** **THE WITNESS:** Well, I guess it would be
 20:39:45 **25** easy to track down if there is information and
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20:39:49 **1** testimony about when different mines were
 20:39:52 **2** started and stopped.
 20:39:53 **3** **Q.** (By Mr. Prost) Your opinion on fibers per
 20:40:09 **4** gram and your extrapolation from what you found in
 20:40:12 **5** the samples, am I correct that you are assuming that
 20:40:17 **6** the asbestos contamination is consistent throughout
 20:40:21 **7** the entire sample?
 20:40:23 **8** **A.** The accessory mineral -- the findings of
 20:40:25 **9** the asbestos accessory minerals is consistent
 20:40:30 **10** throughout. That's not me assuming it. That's the
 20:40:33 **11** protocol. Because all TEM analysis, air samples,
 20:40:37 **12** water samples, when you filter it or pull through a
 20:40:40 **13** filter, you make that assumption.
 20:40:41 **14** **Q.** Your calculations assume that the fibers
 20:40:44 **15** are present at the same levels and evenly distributed
 20:40:48 **16** throughout every milligram of the sample; is that
 20:40:53 **17** right?
 20:40:53 **18** **MR. CIRSCH:** Object to form.
 20:40:54 **19** **THE WITNESS:** That there will be -- this
 20:40:55 **20** is what the range is that we should find, as we
 20:41:00 **21** talked about ad nauseam -- I'm sorry -- we
 20:41:04 **22** talked about earlier.
 20:41:05 **23** If we found one and analyzed it again and
 20:41:07 **24** found zero, that would not be surprising because
 20:41:10 **25** we're right at the detection limit. But if we
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20:41:12 **1** found a significant number, 10, 15, 25, I would
 20:41:17 **2** expect that we would find positive samples in
 20:41:19 **3** each and every -- if we were to do that and do
 20:41:22 **4** that for some time, that there is enough in
 20:41:26 **5** there that would make that where we would find
 20:41:28 **6** similar concentrations.
 20:41:29 **7** **Q.** (By Mr. Prost) So at the detection limit
 20:41:34 **8** level where you're only finding a couple of fibers,
 20:41:38 **9** you wouldn't be surprised to examine the same sample
 20:41:42 **10** and not have a nondetect; is that right?
 20:41:44 **11** **A.** That wouldn't surprise me, and it wouldn't
 20:41:46 **12** surprise me if we had found two fibers the first time
 20:41:49 **13** or two asbestos -- regulated asbestos structures the
 20:41:52 **14** first time and next time you find four. So you will
 20:41:54 **15** have a range at those lower detection limits.
 20:41:58 **16** **Q.** Have you ever done a study to verify the
 20:42:02 **17** consistency of distribution throughout an entire
 20:42:06 **18** sample?
 20:42:06 **19** **A.** No. On the distribution and consistency
 20:42:10 **20** we haven't done any additional analysis that anybody
 20:42:13 **21** else has ever done in the past for analyzing these
 20:42:17 **22** same type of samples other than we're using a more
 20:42:21 **23** sensitive method.
 20:42:21 **24** **Q.** You were shown an EDS -- EDXA spectra. I
 20:42:25 **25** think it was Exhibit 12 maybe, if you could pull that
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20:42:30 1 up.
 20:42:41 2 MR. CIRSCH: You can use this one for now.
 20:42:43 3 THE WITNESS: Oh, thank you.
 20:42:44 4 Q. (By Mr. Prost) You were asked some
 20:42:45 5 questions about how at the bottom there's references
 20:42:47 6 to the different -- what do you call it -- not
 20:42:51 7 minerals -- the components. You see what I'm talking
 20:42:55 8 about at the very bottom?
 20:42:59 9 A. In the bottom left-hand corner?
 20:43:01 10 Q. Correct.
 20:43:02 11 A. Yes.
 20:43:02 12 Q. Thanks.
 20:43:03 13 And you said, I think, that you weren't
 20:43:05 14 sure if the software automatically pulled up those
 20:43:07 15 calculations or the ratios, the different numbers; is
 20:43:10 16 that right?
 20:43:12 17 A. That's correct.
 20:43:13 18 Q. All right.
 20:43:14 19 A. It's not so much the ratios; it's that you
 20:43:17 20 can do it by elemental percentage or the oxides.
 20:43:20 21 Q. If the software automatically pulled that
 20:43:23 22 up, your analyst wouldn't delete it before they
 20:43:25 23 printed that, would they?
 24 MR. CIRSCH: Object to form.
 20:43:28 25 THE WITNESS: No. If it is on there for
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 20:43:30 1 that particular software, it would be a toggle
 20:43:33 2 switch they would either turn on or turn off.
 20:43:35 3 What's more important is we're following
 20:43:36 4 the ISO method for quantitative EDS where we
 20:43:41 5 have collected the appropriate count times.
 20:43:44 6 Q. (By Mr. Prost) So the analyst could flip
 20:43:46 7 a switch, and it could produce those specific
 20:43:49 8 calculations for us?
 20:43:51 9 A. I don't know that.
 20:43:52 10 MR. CIRSCH: Object.
 20:43:53 11 THE WITNESS: It was talked about at
 20:43:55 12 length earlier. It's not something we routinely
 20:43:57 13 do or I'm relying on.
 20:44:03 14 Q. (By Mr. Prost) Is there anything else
 20:44:04 15 that you can think of where there's a switch that you
 20:44:08 16 could turn off information that the software was to
 20:44:10 17 automatically put on there?
 20:44:12 18 MS. O'DELL: Object to form.
 20:44:13 19 MR. CIRSCH: Objection.
 20:44:13 20 THE WITNESS: I never stated that the
 20:44:16 21 software automatically wants to do it and the
 20:44:18 22 analysts are fighting with the software where
 20:44:21 23 the software is saying, no, no, I need to do
 20:44:22 24 this.
 20:44:22 25 Q. (By Mr. Prost) I'll rephrase the
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20:44:23 1 question.
 20:44:23 2 Are you aware of any other information
 20:44:25 3 that is available on the software that is not on
 20:44:29 4 there or that there's a switch that has turned it
 20:44:32 5 off?
 20:44:32 6 A. Again, as I discussed earlier some many
 20:44:35 7 hours ago, that I would have to check, if my client
 20:44:40 8 asks. And if my client asks for me to check, I'll
 20:44:42 9 certainly take it under serious consideration.
 20:44:45 10 MR. PROST: That's all I have for now.
 20:44:46 11 THE WITNESS: Thank you.
 20:44:47 12 MR. PROST: Alex, do you have some more
 20:44:49 13 questions?
 20:44:49 14 MR. CHACHKES: No.
 20:45:00 15 (Recess from 8:45 p.m. to 8:55 p.m.)
 20:56:20 16 EXAMINATION
 20:56:25 17 BY MS. O'DELL:
 20:56:25 18 Q. Dr. Longo, it's been a very long day,
 20:58:09 19 but --
 20:58:10 20 A. Yes, ma'am, it has.
 20:58:11 21 Q. It has, I know, for you. I have a few
 20:58:14 22 questions for you.
 20:58:16 23 First, before we begin, would you please
 20:58:19 24 describe your educational background, your background
 20:58:24 25 and expertise.
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 20:58:26 1 A. Yes. My educational background is that I
 20:58:31 2 graduated from the University of Florida with a
 20:58:32 3 bachelor's of science in microbiology. Went on to
 20:58:35 4 graduate school in the materials science department
 20:58:38 5 and graduated in 1983 with a Ph.D. in materials
 20:58:41 6 science and engineering.
 20:58:42 7 I started a small company, and we were one
 20:58:45 8 of the first TEM labs in the country that specialized
 20:58:48 9 in the analysis of asbestos by transmission electron
 20:58:53 10 microscopy. Went on to in 1988 open the doors of
 20:58:57 11 Materials Analytical Services and have been there
 20:59:00 12 ever since as president.
 20:59:01 13 While I was at the University of Florida,
 20:59:03 14 I stayed on while I started that first little company
 20:59:06 15 and eventually became visiting assistant professor at
 20:59:10 16 the University of Florida, which I gave up that
 20:59:12 17 position in approximately 1986 or so.
 20:59:17 18 Materials Analytical Services grew at some
 20:59:20 19 point to almost 80 employees, where we specialized in
 20:59:24 20 everything from analysis of asbestos to materials to
 20:59:29 21 semiconductors, even doing work for the Department of
 20:59:33 22 Defense on various types of contracts.
 20:59:37 23 Since that time, we've probably analyzed
 20:59:41 24 somewhere in the order of 300,000 or 400,000
 20:59:44 25 individual asbestos samples. We worked with various
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20:59:49 **1** states and agencies in litigation for property damage
 20:59:52 **2** and developed techniques for reverse engineering
 20:59:56 **3** asbestos-containing products so you could identify
 20:59:57 **4** the manufacturer.
 20:59:59 **5** And I was the expert for the City of
 21:00:02 **6** New York, the State of New York, the State of Hawaii,
 21:00:08 **7** the State of Utah, the City of Chicago, plus the
 21:00:13 **8** entire school system and public buildings in the
 21:00:18 **9** State of Texas.
 21:00:20 **10** We were the referee lab for the
 21:00:23 **11** bankruptcies that involved both U.S. Gypsum,
 21:00:25 **12** W.R. Grace, U.S. Mineral as well -- additionally,
 21:00:29 **13** Turner & Newall's Limpet, as the referee lab where if
 21:00:33 **14** somebody had made a claim, it was up to us to
 21:00:36 **15** validate that the particular sample coming out of a
 21:00:39 **16** particular building was, in fact, that manufacturer's
 21:00:44 **17** product.
 21:00:44 **18** I have published in the peer-reviewed
 21:00:47 **19** literature on the types of testing that we've done
 21:00:50 **20** for both asbestos and nonasbestos type products.
 21:00:55 **21** I have taught at the American Industrial
 21:01:01 **22** Hygiene Association for teaching other industrial
 21:01:04 **23** hygienists the utility of transmission electron
 21:01:06 **24** microscopy specifically for asbestos as well as other
 21:01:09 **25** industrial hygiene applications for particle size
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21:02:56 **1** won't do it again.
 21:02:57 **2** And I'm a member of various organizations.
 21:03:03 **3** The American Industrial Hygiene Association, the
 21:03:13 **4** microscopy -- materials science microscopy, as well
 21:03:16 **5** as I'm a board certified forensic engineer, which is
 21:03:19 **6** not just pay your money; you actually have to qualify
 21:03:22 **7** from your experience and renew that. I finally
 21:03:26 **8** became a fellow in forensic engineering for what I
 21:03:30 **9** do.
 21:03:31 **10** I guess that's it.
 21:03:32 **11** Q. Have you been qualified as an expert in
 21:03:37 **12** asbestos testing and allowed to testify in federal
 21:03:42 **13** court?
 21:03:42 **14** A. Yes. I've been in federal court many
 21:03:46 **15** times on our asbestos type work, and in fact I've had
 21:03:49 **16** a handful of appellate opinions that the methodology
 21:03:53 **17** we use is sound science. I've been qualified as both
 21:03:57 **18** a materials scientist in the areas of microscopy, in
 21:04:02 **19** the areas of asbestos analysis, in the areas of
 21:04:06 **20** industrial hygiene specifically to do with asbestos.
 21:04:09 **21** And I'm still not a certified industrial hygienist.
 21:04:12 **22** Q. What were you asked to do in this case?
 21:04:15 **23** A. I was asked to determine, using standard
 21:04:18 **24** protocols, peer-reviewed protocols that are normally
 21:04:22 **25** used for the determination of asbestos in materials,
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21:01:13 **1** analysis, fugitive type particulates for air quality.
 21:01:20 **2** Our laboratory is one of the few in the
 21:01:23 **3** country that does VOC testing for all the green
 21:01:27 **4** labeling. We're certified to do that by the ISO
 21:01:30 **5** certification.
 21:01:31 **6** Our laboratory also has an FDA laboratory
 21:01:34 **7** number so that we do do pharmaceutical or UPS type
 21:01:40 **8** testing to verify, typically, different chemicals and
 21:01:47 **9** materials that may be emitted or inhaled or injected
 21:01:52 **10** or taken by mouth.
 21:01:54 **11** I've been doing this for almost 30 years,
 21:01:57 **12** and my specialty has been and my research over the
 21:02:01 **13** years has been asbestos-containing products and the
 21:02:05 **14** propensity or not to cause significant exposure
 21:02:08 **15** during the use of those products.
 21:02:11 **16** I was the primary author of the ASTM
 21:02:15 **17** Method for the Analysis of Asbestos Fibers and
 21:02:18 **18** Bundles in Settled Dust, the D2205 committee for ASTM
 21:02:26 **19** standard method, which is probably the most rigorous
 21:02:30 **20** peer-reviewed methodology outside of ISO.
 21:02:33 **21** To get your committee -- your
 21:02:38 **22** subcommittee, your committee, and eventually all
 21:02:42 **23** 40,000 members have the ability for the final time
 21:02:47 **24** when it becomes a standard to vote negative on it.
 21:02:52 **25** One negative vote sends it back. I did that once. I
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21:04:27 **1** air, bulk samples, water samples, what have you, if
 21:04:31 **2** there was in fact regulated asbestos in these
 21:04:35 **3** containers of Johnson & Johnson Baby Powder, Shower
 21:04:43 **4** to Shower during the time that Johnson & Johnson was
 21:04:47 **5** manufacturing that before they sold it to Valeant,
 21:04:51 **6** Valeant Pharmaceuticals.
 21:04:53 **7** And using standard methodology to
 21:04:56 **8** determine if there was detectable amounts of
 21:04:58 **9** regulated asbestos in these containers, historical
 21:05:02 **10** containers as well as more contemporary containers.
 21:05:08 **11** For this particular case for the MDL we have not
 21:05:13 **12** gotten to the MDL China mines but to verify if it
 21:05:18 **13** was, in fact, present or not.
 21:05:20 **14** Q. Okay. Is the methodology that you used in
 21:05:25 **15** your work in this case supported by the peer-reviewed
 21:05:32 **16** literature?
 21:05:32 **17** A. Yes. We're using standard protocols that
 21:05:34 **18** other scientists in the field of asbestos testing
 21:05:36 **19** have used in the years.
 21:05:38 **20** If there's a publication involving
 21:05:40 **21** asbestos analysis of some sort or asbestos in some
 21:05:44 **22** product or asbestos release, the protocols that we
 21:05:49 **23** use are typically referenced in those peer-reviewed
 21:05:51 **24** publications as well as these are standards, standard
 21:05:55 **25** testing protocols that are accepted across the
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21:05:59 **1** country for these types of analysis and across the
 21:06:02 **2** world, especially the International Standards
 21:06:05 **3** organization protocols that we use.
 21:06:07 **4** **Q.** And is that because of the methodology
 21:06:08 **5** that you use and because of the fact that it's
 21:06:12 **6** generally accepted in the scientific community, is
 21:06:14 **7** the process that you undertook here something that
 21:06:18 **8** could be replicated by another scientist or lab?
 21:06:24 **9** **MR. PROST:** Objection --
 21:06:24 **10** **MR. SILVER:** Objection to form.
 21:06:24 **11** **MR. CHACHKES:** Objection. Leading.
 21:06:26 **12** **MS. WOODS:** Join.
 21:06:26 **13** **THE WITNESS:** Absolutely. They just would
 21:06:28 **14** follow the methodology that we have laid out in
 21:06:29 **15** the reference protocols, and as long as they are
 21:06:32 **16** qualified that they can do this type of
 21:06:34 **17** analysis, they should all be able to be
 21:06:37 **18** replicated.
 21:06:39 **19** **Q.** (By Ms. O'Dell) Let's talk about your
 21:06:40 **20** results just very briefly.
 21:06:45 **21** What were your find -- let me back up and
 21:06:48 **22** ask this question.
 21:06:49 **23** What time period did the samples you
 21:06:51 **24** tested for your January 2019 report, what time period
 21:06:56 **25** does that cover?
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21:08:28 **1** Of the 15 Imerys railroad car samples,
 21:08:31 **2** eight were positive, or 53 percent.
 21:08:36 **3** Excluding the seven Asian Johnson Baby
 21:08:40 **4** Powder containers would give us 65 Johnson Baby
 21:08:43 **5** Powder and STS and Imerys railroad car samples
 21:08:47 **6** analyzed; 44 were positive, or 68 percent, for
 21:08:49 **7** amphibole asbestos.
 21:08:51 **8** And then we have a break -- then, of
 21:08:53 **9** course, we have the breakdown of each of these
 21:08:57 **10** without the Asian.
 21:08:58 **11** **Q.** What were the results for fibrous talc?
 21:09:04 **12** **A.** The qualitative analysis of fibrous
 21:09:10 **13** talc -- let me just jump to the results section.
 21:09:16 **14** **Q.** Page 9.
 21:09:18 **15** **A.** Thank you. Been a long day.
 21:09:21 **16** **Q.** Sure.
 21:09:22 **17** **A.** Using the ISO PLM method, found that of
 21:09:32 **18** the 56 Italian/Vermont/China source containers that
 21:09:36 **19** we analyzed, 55, or 98 percent, contained fibrous
 21:09:41 **20** talc. The Blount PLM method showed of the 72, 20
 21:09:45 **21** contained fibrous talc.
 21:09:47 **22** The TEM analysis showed that -- and I have
 21:09:54 **23** that somewhere -- that there was similar
 21:09:56 **24** concentration by the heavy density liquid method by
 21:10:01 **25** TEM, which is biased against finding fibrous talc,
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21:06:58 **1** **A.** The 1960s, the 1970s, the 1980s, the
 21:07:03 **2** 1990s, and the early 2000s.
 21:07:05 **3** **Q.** What were the sources from which talc was
 21:07:08 **4** mined?
 21:07:10 **5** **A.** The '60s up until about '67 or so would be
 21:07:13 **6** from Italy; from there to approximately 2002, 2003,
 21:07:21 **7** it would be from Vermont; and after that it's from
 21:07:24 **8** China.
 21:07:25 **9** **Q.** What were your findings regarding
 21:07:27 **10** regulated asbestos fibers?
 21:07:29 **11** **A.** Our results overall for 72 what I'll call
 21:07:35 **12** historical containers that include 15 historical
 21:07:38 **13** railroad car samples from Imerys, and out of that 72
 21:07:44 **14** samples, 50 were positive for regulated asbestos, and
 21:07:48 **15** that gives you a percentage of approximately
 21:07:50 **16** 66 percent or so.
 21:07:52 **17** If we break it down -- and, oh, that
 21:07:54 **18** includes seven MDL samples that came from the Korean
 21:08:00 **19** mine, or what we call the Asian talc.
 21:08:04 **20** If we break it down for the Johnson's Baby
 21:08:08 **21** Powder, we analyzed 34 historical samples with Asian.
 21:08:13 **22** Out of that 34, 24 were positive, or 71 percent.
 21:08:18 **23** We also analyzed 23 historical Shower to
 21:08:21 **24** Shower containers that were Johnson & Johnson, and 18
 21:08:25 **25** were positive, or 78 percent.
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21:10:06 **1** because unless it has iron in it, you'll have the
 21:10:09 **2** same density as platy talc.
 21:10:12 **3** So, really, the best predictor of fibrous
 21:10:16 **4** talc would be the ISO PLM that does not use heavy
 21:10:20 **5** density liquid, and most all the samples except for
 21:10:23 **6** one that we tested had it in there.
 21:10:42 **7** **MS. O'DELL:** Nothing further, Doctor.
 21:10:43 **8** Thank you.
 21:10:45 **9** **THE WITNESS:** Thank you.
 21:10:47 **10** **MR. CHACHKES:** Nothing more here.
 21:10:50 **11** **FURTHER EXAMINATION**
 21:10:52 **12** **BY MR. PROST:**
 21:10:52 **13** **Q.** Just one follow-up.
 21:10:53 **14** You're talking about the results,
 21:10:54 **15** Dr. Longo. Turn to page 6 of your report.
 21:10:58 **16** You talk about how the analysis of 34
 21:11:01 **17** historical Johnson's Baby Powder containers you
 21:11:06 **18** determined were 71 percent positive.
 21:11:09 **19** And then number 2, you say the analysis of
 21:11:11 **20** 22 historical Shower to Shower, or 77 percent,
 21:11:16 **21** positive; but the analysis of the Imerys 15 railroad
 21:11:19 **22** car samples were only 53 percent positive.
 21:11:23 **23** Do you have an explanation for the
 21:11:28 **24** 25 percent difference there between the Imerys
 21:11:31 **25** railroad car samples and the finished product
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21:11:34 1 samples?
 21:11:34 2 A. Yes, sir.
 21:11:36 3 Q. What is that?
 21:11:36 4 A. Only eight were positive out of the 15.
 21:11:40 5 Q. Do you have an explanation for why there
 21:11:43 6 would be such a discrepancy in the positive findings
 21:11:46 7 using your methodology?
 21:11:47 8 MS. O'DELL: Object to the form.
 21:11:48 9 THE WITNESS: I don't look at it as a
 21:11:49 10 discrepancy. We call them like we see it. So
 21:11:52 11 if it's only eight out of the 15, that's all we
 21:11:55 12 saw.
 21:11:57 13 Q. (By Mr. Prost) And you expect that if the
 21:11:58 14 raw talc supplied had a certain percentage of
 21:12:02 15 asbestos, you would see the same percentage in the
 21:12:04 16 finished product?
 21:12:05 17 MS. O'DELL: Object to form.
 21:12:07 18 THE WITNESS: No, I wouldn't expect to see
 21:12:09 19 the same percentage, usually, because you're --
 21:12:11 20 flotation, you're using various methods. And we
 21:12:16 21 don't have a lot of data from the 1990s. So
 21:12:23 22 there may be, you know, a difference in the two.
 21:12:26 23 But we don't have enough data to make that yet,
 21:12:29 24 to make that jump on why one versus the other.
 21:12:33 25 Q. (By Mr. Prost) So your opinion as to what
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 21:12:35 1 could explain the difference is that there's a
 21:12:38 2 flotation method and it's a small sample size?
 21:12:41 3 A. No. I never said that. I said there is a
 21:12:44 4 processing on it, but we don't have a lot of samples
 21:12:46 5 from 1990 and 2000. And, you know, we'll just have
 21:12:51 6 to see as we go forward with additional testing.
 21:12:55 7 Q. So the smaller the sample size, the less
 21:12:57 8 reliable the findings, you would agree?
 21:13:00 9 A. No --
 21:13:00 10 MS. O'DELL: Object to form.
 21:13:00 11 THE WITNESS: I don't agree that the
 21:13:02 12 findings are not reliable at all. They are
 21:13:03 13 reliable. Why there's 53 percent versus some of
 21:13:06 14 the others, you know, hopefully we can answer
 21:13:10 15 this question some day. Or we get a larger
 21:13:17 16 sample size and see if there is actually a
 21:13:17 17 difference.
 21:13:17 18 MR. PROST: No further questions.
 21:13:22 19 MR. SILVER: Hold on. Yes, we do. We
 21:13:23 20 have one more. We can feed it to him or just
 21 21 ask him.
 22 THE WITNESS: Why don't you just go ahead
 21:13:27 23 and ask me.
 24 ///
 25 ///
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21:13:27 1 EXAMINATION
 21:13:27 2 BY MR. SILVER:
 21:13:27 3 Q. Dr. Longo, in your report you characterize
 21:13:29 4 the Imerys samples as railcar samples. Where did you
 21:13:32 5 get that description from?
 21:13:33 6 A. It was on the -- I believe it was right on
 21:13:36 7 the containers as well as from the MDL for the chain
 21:13:40 8 of custodies that they sent.
 21:13:42 9 Q. And sitting here today, you believe that
 21:13:43 10 all those samples were actually railcar samples?
 21:13:47 11 MS. O'DELL: Object to the form.
 21:13:48 12 THE WITNESS: I don't know if they all
 21:13:49 13 were. We'd have to look at the chain of
 21:13:51 14 custodies. But I think there were one or two
 21:13:53 15 that said something different than railroad car
 21:13:57 16 samples, but I just characterized them all as
 21:14:00 17 railroad car samples.
 21:14:01 18 MR. SILVER: Thank you. No further
 21:14:03 19 questions.
 21:14:09 20 (Deposition concluded at 9:14 p.m.)
 21 (Pursuant to Rule 30(e) of the Federal
 22 Rules of Civil Procedure and/or O.C.G.A. 9-11-30(e),
 23 signature of the witness has been waived.)
 24 (Original transcript sent to Mr. Frost.)
 25
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 1 C E R T I F I C A T E
 2
 3 STATE OF GEORGIA:
 4 COUNTY OF HALL:
 5
 6 I hereby certify that the foregoing
 7 transcript was taken down, as stated in the
 8 caption, and the questions and answers thereto
 9 were reduced to typewriting under my direction;
 10 that the foregoing pages 1 through 359 represent
 11 a true, complete, and correct transcript of the
 12 evidence given upon said hearing, and I further
 13 certify that I am not of kin or counsel to the
 14 parties in the case; am not in the regular
 15 employ of counsel for any of said parties; nor
 16 am I in anywise interested in the result of said
 17 case.
 18 This, the 7th day of February, 2019.
 19
 20
 21 _____
 22 FRANCES BUONO, B-791
 23 Georgia Certified Court Reporter
 24
 25
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Cause No.		Case Name	Location	Law Firm	Expert
1)	92-11238-G	Darrell Wayne Caves v Keene Corp.	134 th Judicial District Dallas District Court	Baron & Budd	WEL
2)	45664-A	Wesley Roberts v Owens Corning Fiberglass Corp.	18 th JDC, Parish of Iberville State of Louisiana	Baron & Budd	RLH
3)	DV98-03696	James Blackburn v Dresser Industries	116 th District Court Dallas County, Texas	Baron & Budd	WEL RLH
4)	DV98-03696	James Blackburn v. Dresser Industries	Tyler, Texas	Baron & Budd	WEL
5)		Robert Alton Adcock v. Owens Corning Fiberglass	153 District Court Tarrant County, Texas	Silber Pearlman	
6)	95-1922	William Arthur Brown v Borg Warner	County Court at Law No. 2 El Paso County, Texas	Baron & Budd	WEL
7)	97-16440 04/13/99	Dennis C. Eisenreich and Victoria I. Eisenreich v. Durabla Manufacturing Company, et al.	Civil Division – Asbestos Allegheny y County, Pennsylvania Hon. Robert P. Horgos	Goldberg, Persky & White	RLH
8)	99-2681-3 04/10/01	Billy Ray Meadows v United States Gypsum	McLennan County Waco, Texas	Ness Motley et al	WEL
9)	00-01428	Clyde A. Black, Sr. v Garlock, National Service and A.P. Green	Glynn Superior Court Brunswick, Georgia	Lane & Gossett	
10)	590-228	Benjamin D. Jones v. CSX	Federal Court Brunswick, Georgia	Lane & Gossett	
11)	591-226	James B. Ostein v CXSW	Federal Court Brunswick, Georgia	Lane & Gossett	
12)	98-01249-1	Lee Bailey v U.S. Gypsum	162 nd Court Dallas, Texas	Baron & Budd	WEL
13)	59078 01/09/09	Bobby Jean Thorne, Individually and as Personal	196 th Judicial District Hunt County, Texas	Hendler Law Firm	

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 William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

Cause No.		Case Name	Location	Law Firm	Expert
		Representative of the heirs and Estate of James Bruce Thoren, Deceased, et al v. A C & S, Inc., et al.			
14)	99-268-3 04/02/01	Norman Hines and Frankie Hines v AC&S, Inc., et al.	254 th Judicial District Hunt County, Texas Hon. Richard A. Beacom, Jr.	Hendler Law Firm	
15)	CA-2000-3559 08/20/01	Alfredo Hernandez v GAF Corp. et al.	County Court El Paso Co., Texas	Baron & Budd	WEL
16)	A-920-961- SC(19)	Oscar Kelley Bell, et al. v Dresser Industries	128 th Judicial District Court Orange County, Texas Hon. Pat Clark	Reaud, Morgan & Quinn	WEL
17)	00000232 09/20/01	Betty Lou Cole et al v AC&S	Circuit Court Baltimore, MD	Law Offices of Peter Angelos	WEL
18)	00-1-3297- 10EEH	Edward T.W. Chang v Owens-Illinois, Inc. et al	Circuit Court of the First Circuit, State of Hawaii Hon. Eden Elizabeth Hifo	Galiher, DeRobertis, Nakamura, Ono & Takitani	WEL
19)	98-CP-232792 10/10/01	James W. Henderson Jr. v AC&S et al	Greenville County Court Greenville, SC	Wallace & Graham	
20)	1164-BH00 12/06/01	Betty Wilson, Individually and as Personal Representative of the Heirs and Estate of Leonard Wilson, Deceased v Able Supply Co, et al.	23 rd Judicial District Brazoria County, Texas	Waters & Kraus	
21)	120954/2000 01/10/02	New York City Asbestos Litigation "Jose Lopez"	Supreme Court of the State of New York	Weitz & Luxenberg	RLH
22)	98-17939 1/30/02	William Anderson v A-Best Products et al	Allegheny County, Pennsylvania	Goldberg, Persky & White	RLH
23)	B-163, 425 02/04/02	Joseph Jagneaux et al v Union Carbide Corp.	60 th Judicial District Jefferson Co. TX	Ness Motley et al	

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	Cause No.	Case Name	Location	Law Firm	Expert
24)	2001-031817 04/23/02	Karen & Jeffrey Peterson v Hill Brothers Chemicals	Alameda County Superior Court	Kazan McClain et al	
25)	41,862 06/06/02	Verda Sutton et vir v AC&S Inc et al	356 th Judicial District Hardin County, TX	Breen Coon & Assoc.	
26)	No. 01-C-9004 10/01/02	Asbestos Trial Group	In the Circuit Court of Kanawha County, WV	Goldberg Persky & White	RLH
27)	No. 95-3284 11/07/02	Christina Torrejon, Individually and as Personal Representative of the Estate of Joseph Torrejon v Mobil Oil Co., et al.	Civil District Court for the Parish of Orleans State of Louisiana	Martzell & Bickford	WEL
28)	No. 99-20000 11/12/02	Virginia: In the Circuit Court for the City of Newport News in Re: All Asbestos Cases	Circuit Court for the City of Newport News, VA Judge Robert W. Corran	Ness Motley et al	
29)	99-06508-M 01/13/03	Thurman Harmon; Glendell Don Maxey; Minnie June McGuire et al v Owens Corning et al	District Court Dallas County TX, 298 th Judicial Court	Baron & Budd	WEL
30)	24-X-02000669 03/19/03	Harry Hunter et al v AC&S Inc et al	Baltimore City Circuit Court Judge Rombro	Law Offices of Peter Angelos	
31)	No. 01-02964 03/20/03	George Stewart v A-Best Products et al	Allegheny County PA	Goldberg Persky & White	RLH
32)	84-429634-NP 03/28/03	Board of Education of the School District of the City of Detroit, et al v The Celotex Corporation, et al.	Third Judicial Circuit Court Wayne County, MI Hon. Robert J. Columbo, Jr.	Humphrey Farrington McClain & Edgar, P.C.	RLH
33)	24-X-02000672 05/21/03	Richard Harris et al v AC&S, Inc. et al	Circuit Court Baltimore City Baltimore MD Hon. Thomas E. Noel	Law Offices of Peter Angelos	WEL
34)	120146/01 105031/02	In Re: New York Asbestos Litigation	Supreme Court of the State of New York, County of NY,	Levy Phillips & Konigsberg, LLP	RLH

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	Cause No.	Case Name	Location	Law Firm	Expert
	103082/02 06/10/03	Tucker, Gomez & Perkins	Hon. Louis B. York		
35)	No. 01-C-753 06/19/03	Eddie Caffey et al v Foster Wheeler Energy Corp.	Cass County, TX Judge Burgess 5 th District	Nix, Patterson & Roach	
36)	No. 01-454-D	Louis Barletta and Mary Jane Barletta v A.W. Chesterton	Kleberg County, TX 105 th Judicial District	Hendler Law Firm	
37)	No. 17656-JG01	William Lonas, Individually and as the personal representative of the heirs to the estate of Charlene Lonas and John Lonas v AC&S, Inc.	Brazoria County, TX 239 th Judicial District	Brent Coon & Assoc	
38)	No. 01L201 10/30/03	Shirley Garzee, Individually and as Special Administrator for the Estate of Melvin Garzee, Deceased, Plaintiff v AC&S Inc et al, Defendants	Peoria County, IL 10 th Judicial Circuit Court	Walker & Wylder	
39)	No. 02-C-220 11/06/03	Schiller v Garlock	Cass County, TX Judge Burgess 5 th District	Nix, Patterson & Roach	
40)	No. 437948 11/19/03	Blandford v Garlock	Cuyahoga, OH Judge Harry A. Hanna	Baron & Budd	WEL
41)	No. 2002-17551 11/16/03	Bertucci v Northrup Grumman	Parish of Orleans Miriam G. Waltzer Judge Ret. Special Master	Martzell & Bickford	WEL
42)	No. 033-6161 01/15/04	Lois Lisac v Allied Signal et al	Judge Timothy P. O'Reilly Common Pleas of Allegheny Co., PA	Goldberg Persky & White	RLH
43)	No. 17-200000- 03 03/01/04	Paul Verret & Judith Verret v American Biltrite Ind. Et al	17 th Judicial District Tarrant Co., TX Judge Curry	Richardson Patrick Westbrook & Brickman	
44)	No. 03-3367	C. Ann Jones & the Rev.	Civil District Court for the Parish	Martzell & Bickford	

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	Cause No.	Case Name	Location	Law Firm	Expert
	05/13/04	George A. Jones v Meyer's Auto Parts, Inc.	of Orleans Judge Lloyd Medley, Jr.		WEL
45)	No. 20-011317 09/24/04	Karen Rose, Executrix of Estate of Robert Habovick v F.B. Wright Co.	Allegheny Co., PA Judge Robert J. Colville	Savinis D'Amico & Kane	RLH
46)	No. 37073-04 09/24/04	Michael Little, Executor of Estate of Zebulon A. Little v Garlock	Circuit Court for the City of Newport News, VA Judge Vincent Conway	Patten, Wornom, Hatten & Diamonstein	WEL
47)	No. CBC 03-427234 10/04/04	Ernst Kruger & Brigitte Kruger v AC&S, Inc. et al	San Francisco Superior Court, San Francisco CA Judge David Balatti	Harowitz & Tigerman	RLH
48)	No. BC 307058 10/05/04	Robert Treggett et al v Alfa Laval et al	Judge William Fahey Los Angeles CA	Waters & Kraus LLP	
49)	No. 117820 10/29/04	Donald Reynolds & Nancy Reynolds v Garlock Sealing Technologies & Niagara Insulation Inc	State of NY Supreme Court County of Niagara	Lipsitz & Ponterio	RLH
50)	No. 36688H-02 11/15/04	Pyatt v Garlock	Circuit Court for the City of Newport News, VA Judge Edward L. Hubbard	Patten Wornom Hatten & Diamonstein	WEL
51)	No. 220451 01/12/05	Lippincott v Moldex-Metric, Inc. et al	Judge Frederick H. Bysshe, Jr. Ventura CA	Levin Simes Kaiser & Gornick	RLH
52)	No. 01-614 02/24/05	Ladell Alexander et al v American Cyanamid, et al	District Court Harris County, Texas Hon. Bonnie Leggat	The Carlisle Group	
53)	No. CC-03-01977-C 03/01/05	Bostick et al v Georgia Pacific Corp.	Dallas County Court Judge Montgomery	Baron & Budd	WEL
54)	No. 495202 03/03/05	Leech v 3M Company et al	Court of Common Pleas Cuyahoga County	Baron & Budd	WEL

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Cause No.		Case Name	Location	Law Firm	Expert
			Judge Hanna		
55)	No. G.D. 104-9409 03/11/05	Dinger v Dravo Corporation	Court of Common Pleas Allegheny County, PA Judge Terrence O'Brien	Savinis D'Amico & Kane	RLH
56)	No. 02-CI-00310 04/13/05	Ava Nell Dexter, Individually & James M. Dexter Executor v Triangle Insulation & Sheetmetal Co. et al	Commonwealth of Kentucky Marshall Circuit Court	Sales Tillman Wallbaum Catlett & Satterley	WEL
57)	No. 04L-009806 No. 04L-009809 10/12/05	Spirydowicz v American Biltright Inc. et al	Circuit Court of Cook County, IL Judge Janura	Richardson Patrick Westbrook et al	RLH
58)	No. 119964/03 No. 117193/03	Matos et al v American Standard, Inc. et al	State of New York County of New York	Levy Phillips & Konigsberg, LLP	RLH
59)	No. 438617 10/11/05	Joan & David Salyer v Kaiser Gypsum	Superior Court of San Francisco Judge Donald Mitchell	Levin Simes Kaiser & Gornick	WEL
60)	No. 04-16237CA(42) 12/07/05	Joseph Mallia v Bennett Auto Supply Inc., et al	Circuit Court of the Eleventh Judicial Circuit in and for Miami Dade County, Florida Judge Richard Yale Feder	David Lipman, P.A.	WEL
61)	No. 04-L-676 02/22/06	Anita Douglas O'Connell et al v A.W. Chesterton, Inc. et al	3 rd Judicial Court Madison County, IL	Baron & Budd	WEL
62)	No. 39028T-01	Wanda T. Jones, Administratrix of the Estate of Garland F Jones, Jr. Deceased v John Crane, Inc.	Circuit Court for the City of Newport News, VA	Patten, Wornom, Hatten & Diamonstein	WEL
63)	No. 04C101843	Duel Lee v Garlock	Jefferson County Circuit Court Louisville, KY	Sales Tillman Wallbaum Catlett & Satterley	WEL
64)	No. 2002-576 07/21/06	Lewis Wright, et al v Honeywell International, Inc. et al	Circuit Court of Holmes Co. Lexington, MS	Law Offices of David Lipman	WEL

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 William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

Cause No.		Case Name	Location	Law Firm	Expert
65)	No. 2005EV000009D 09/19/06	Patsy Jean Bodkin v Georgia Pacific Corporation, et al.	State Court of Fulton County State of Georgia Judge Henry M. Newkirk	Patten Wornom Hatten & Diamonstein	WEL
66)	No. 016-7841 01/22/07	Kinsella v Argo Parking Co., et al	Court of Common Pleas Allegheny County, PA Judge Ronald W. Folino	Savinis D'Amico & Kane	RLH
67)	No. 05-14194 01/29/07	Eicher v Sears Roebuck & Co., et al	Court of Common Pleas Allegheny County, PA Judge Eugene Scanlon	Savinis D'Amico & Kane	RLH
68)	No. 06-CI-00056 02/2007	Mary Katherine Irwin v General Motors Corp.	Metcalf Circuit Court Division I Edmonton, KY	Sales Tillman Wallbaum Catlett & Satterley	WEL

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69)	No. BC357289. 08/2006	Conrad Beauchamp et al v Allis- Chalmers et al	Los Angeles Superior Court Central District Dept 71 Hon. Soussan G. Bruguera	Baron & Budd	WEL
70)	No. 003451 12/2006	Leslie Victor Duke and Dorian Duke v A.W. Chesterton Co., et al.	Philadelphia County Court of Common Pleas Civil Trial Division	Baron & Budd	WEL
71)	No. 00301TF 03/2007	Sandra K. Oney, Executor of the Estate of Sharon Vaughn, deceased v John Crane Inc.	Newport News Circuit Court Newport News, VA Judge Timothy Fisher	Patten Wornom Hatten & Diamonstein	WEL
72)	No. 2003- 58354 05/2007	Michael Donald Edwards v Quigley Company, Inc.	11 th Judicial Court Harris County, Texas	Baron & Budd	WEL
73)	No. 2004- 19730 10/2007	Emma Josephine Maloney Martin, Individually and as Personal Representative of the Heirs and Estate of James Hubert Martin v Quigley Company, Inc. et al	11 th Judicial Court Harris County, TX	Baron & Budd	WEL
74)	No. 2007-CA- 001627 08/2007	R.T. Vanderbilt Company, Inc v Hon. Rebecca Overstreet and Johnny Franklin, Individually and as Administrator of the Estate of Flora Franklin	Anderson Circuit Court Commonwealth of Kentucky Court of Appeals Judge Rebecca Overstreet	Sales Tillman Wallbaum Catlett & Satterley	WEL
75)	06CV1393 11/2007	Oliver D. Smith and Peggy Ann Bowen Smith v Crane Co. et al.	Galveston County, Texas 122 nd Judicial District Court Judge John Ellisor	Baron & Budd	WEL
76)	03-05383-L 11/2007	Bobby Dale James, Individually and as Personal Representative of the Heirs and Estate of Constance Mae James, Deceased, and as anticipated	Dallas County, TX 193 rd Judicial District Court Honorable Knize	Baron & Budd	WEL

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

		Personal Representative of the Heirs and Estate of Joe Thomas James, Deceased, Plaintiffs v The Sherwin William Company et al			
77)	06-CI-01207 10/2007	Teresa Ann Schwarber, Executrix of the Estate of Carl John Schwarber, Plaintiff v General Motors Corp et al	Commonwealth of Kentucky Campbell Circuit Court Second Division Judge: Hon. Fred A Stine, V	Sales Tillman Wallbaum Catlett & Satterley	WEL
78)	2005-17511 02/08/08	Rosemary Smith, Brady Smith and Donna Hubbard, Individually and as personal Representative of the Heirs and Estate of Dorman Smith v Elementis Chemicals, Inc. et al.	District Court Harris County, Texas, 11 th Judicial District Honorable Mark Davidson	Waters & Kraus	WEL
79)	BER-L-9592-02 02/2008	Susan M. Buttitta, Individually and as Executrix of the Estate of Mark Buttitta v Allied Signal, Inc et al	Bergen County Law Division, Superior Court of New Jersey	Levy Phillips & Konigsberg, LLP	WEL
80)	E-159, 183-Q 03/2008	Caryl Richardson, Individually and as Independent Executrix of the Estate of Willis N. Whisnant, Jr., Deceased and as Representative of the Wrongful Death Beneficiaries, et al v E.I. du Pont de Nemours and Company	172 nd Judicial District Court of Jefferson County, Texas	Reaud, Morgan & Quinn, LLP	WEL
81)	No. 05CV010416 04/14/08	Colleen Lemberger, et al v Anchor Packing Co., et al	State of Wisconsin Milwaukee Co. Circuit Court Hon. Richard J. Sankovitz	Cascino Vaughan Law Offices, Ltd.	WEL
82)	No. CV567637 04/09/08	James Michael Angelo, deceased, v 3M Company, et al	State of Ohio, County of Cuyahoga, Court of Common Pleas Civil Division	Baron & Budd	WEL
83)	No. 07-2-539-7 03/25/08	Judy Clauson v Atlas Foundry Limited Partnership d/b/a Atlas	Grays Harbor County Superior Court	Bergman & Frockt	WEL

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

		Casting & Technology, et al	Judge: Hon. David Edwards		
84)	No. 01359 DP 08/25/08	Koonce v John Crane	Circuit Court for the City of Newport News, State of VA Judge Pugh	Patten Wornom Hatten & Diamondstein, LC	WEL
85)	No. 38504 AF 10/27/08	King v John Crane	Circuit Court of the City of Newport News, State of VA Judge Foster	Patten Wornom Hatten & Diamondstein, LC	WEL
86)	No. 01180 VC 11/14/08	Morton v Exxon	Circuit Court for the City of Newport News, State of VA Judge Fisher	Patten Wornom Hatten & Diamondstein, LC	WEL
87)	No. 3:07-CV- 00065-H 02/05/09	Olwen Moeller v Garlock Sealing Technologies, LLC	U.S. District Court Western District of Kentucky Judge: Hon. John Heyburn	Sales Tillman Wallbaum Catlett & Satterley	WEL
88)	No. 2008-0445 03/03/09	Spencer v United Gilsonite Laboratories, et al	Supreme Court of the State of New York, County of Cayuga	Belluck & Fox	RLH
89)	No. 01-CI- 1344	Debbie Ellen Rehm, Individually and as Executrix of the Estate of James David Rehm, et al v Navistar International Corporation et al.	Jefferson Circuit Court, Division Eight (8), KY Judge: Hon. A.C. McKay Chauvin	Sales Tillman Wallbaum Catlett & Satterley	WEL
90)	No. 2009-06- 3742-A	Oscar Torres and Spouse, Dora Torres v Union Carbide Corporation, et al.	107 th JDC of Cameron Co., Texas	Williams Kherkher Hart Boundas, LLP	WEL
91)	No. 09-08930- 1	Vernon Walker, Sr. & Patsy Walker v RPM International, Inc et al	162 nd District Court of Dallas County, Texas	Baron & Budd	WEL
92)	No. 559,507	Betty Lou Bello v Anco Insulation, Inc., et al.	19 th Judicial District Court for the Parish of Eat Baton Rouge, State of Louisiana Judge Robert J. Burns	Baron & Budd	RLH
93)	No.	Kenneth Ochs, et al., v AC&S,	Circuit Court for Baltimore City	Law Offices of Peter G.	

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	24X09000165	Inc., et al.	Hon. Sylvester B. Cox	Angelos, PC	WEL
94)	No. 2901-10	Craig D. Bishop and Donna M. Bishop v Advance Auto Parts, LLC, et al.	Albany County Supreme Court Albany, NY Hon. Christian F. Hummel	Lipsitz & Ponterio, LLC	RLH
95)	No. 2011-636	Thomas Kenney v. A.W. Chesterton, et al.	Civil District Ct. for Parish of Orleans, LA	DeLuca & Nemeroff	WEL
96)	No. 07-2-04511-9	David Taylor v. Saberhagen Holdings, et al.	Superior Ct. of Washington for Pierce County	Bergman, Draper & Frockt	WEL
97)	No.	Lloyd Benton/John Garcia v.	New York Supreme Court	Levy & Phillips	WEL
98)	No. 10-CI-00504	Robert T. Bush v. Eaton Corp., et al.	Warren Circuit Ct. of Kentucky	Sales, Tillman	WEL
99)	No. BC453352	Williamson, et al. v. Calaveras Asbestos Ltd., et al.	Los Angeles County, CA	Waters & Kraus	JT
100	No. 10-08454-D	Martha Ann Gensler v. Ashland, Inc., et al.	Dallas County, TX	Baron & Budd	WEL
101	No. BC 457257	Carolyn Esters v. Acument Global Technologies, et al.	Los Angeles County Sup. Ct., CA	Lanier Law Firm	RLH
102	2008 EV003933Y	McReynolds v. Southern Waste Services, Inc., et al.	Fulton County State Court, GA	Steel & Moss	WEL
103	CL 04-1127	Stephen W. Wilbur v. Garlock Sealing Technologies, LLC	Circuit Court for the City of Portsmouth, Virginia	Glasser & Glasser	
104	1:03-CV-17000	In Re: Welding Fume Products Liability Litigation	U.S. District Court, Northern District of Ohio, Eastern Div.		WEL
105	38356P-03 38116P-03	Raymond N. Crockett v. Garlock Sealing Technologies, LLC, et al./ Lucas E. Hicks, Jr., v. Garlock Sealing Technologies, LLC, et al.	Circuit Court for the City of Newport News, Virginia	Patten, Wornom, Hatten & Diamonstein, LC	WEL
106	2005-14079	William Raines, Sr. v. Ametek, Inc., et al.	Harris County District Court, Harris County, Texas	Heard Robins Cloud & Lubel	WEL
107	2006-31321	Glenn Riley v. Aqua-Chem, Inc., et al.	Harris County District Court, Harris County, Texas	Kaeske Law Firm	

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

108	04-C1-00274	Johnny Franklin v. General Motors Corp., et al.	Anderson Circuit Court, Kentucky	Sales, Tillman, Wallbaum Catlett & Satterly	WEL
109	10-2-11903-1	Dawn Dawes v. Certainteed Corp.	Superior Court of Washington for Pierce County	Bergman Draper & Ladenberg	WEL
110	11-4899	Juanita Page v. The McCarty Corp., et al.	Parish of Orleans, State of Louisiana	Lanier Law Firm	WEL
111	2009-46247	Rocky W. Bludworth v. Anderson Brooksbank Valves, USA, et al.	District Court of Harris County, Texas	Baron & Budd	WEL
112	2010-44712-ASB	Magdalena Abutahoun v. Asbestos Companies, et al.	District Court of Harris County, Texas	Hawkins Parnell & Thackston, LLP	WEL
113	CGC-04-436967	Ernest A. Lantz v. Asbestos Corporation, et al.	San Francisco County, California	Clapper & Patti	RLH
114	2011-12718	Frederick R. Schulte v. CBS Corp., et al.	Civil District Court for the Parish of Orleans, Louisiana	Nemeroff Law Firm	WEL
116	11-2-07966-5	Lorena Jo Potts v. Ingersoll-Rand Co., et al.	Superior Court of Washington for Pierce County	Bergman Draper Ladenburg	WEL
117	2003-00872	Louis Cureau v. Flintkote, et al.	Civil District Court for the Parish of Orleans, Louisiana	Murray Law Firm	RLH
118	12-2-01923-1	Thomas Montaney v. Certainteed Corporation, et al.	Superior Court of Washington for King County	Bergman Draper & Ladenburg	WEL
119	RG 12613671	Patrick Scott v. Allied Packing	Alameda County, CA	Kazan McClain Lyons	WEL
120	BC 475835	Dimitris Couscouris v. Hatch Grinding Wheels, Inc., et al.	Los Angeles County, CA	Lanier Law Firm	WEL
121	0337-Aug.2011	Thomas & Jean Amato v. Bell & Gossett, et al.	Philadelphia County, PA	Nemeroff Law Firm	WEL
122	2682-Sept. 2010	Charlotte Vinciguerra v. Bayer Cropscience, Inc., et al	Philadelphia County, PA	Nemeroff Law firm	WEL
123	00002-Jan. 2010	William H. Seaman, Jr. v. Owens-Illinois, Inc., et al.	Philadelphia County, PA	Satterley & Kelley	WEL
124	RG 12629580	Rose-Marie Grigg v. Allied Packing & Supply, Inc., et al	Alameda County, CA	Kazan McClain Lyons & Greenwood	WEL

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

125	BC 473955	David E. Stanley/Lori Erhart v. CSK Auto, Inc., et al.	Los Angeles, CA	Lanier Law Firm	WEL
126	BC 342363	Saller, Donna v. Bondex Int'l, et al.	Los Angeles, CA	Waters & Kraus	WEL
127	2:13-cv-01747	Joanne Lipson (James Turner) v. Fraser's Boiler Service, Inc., et al.	U.S. District Court-Western District of Washington	Bergman Draper & Ladenburg	WEL
128	100-BK-31607	In Re: Garlock Sealing Technologies	U.S. Bankruptcy Court, Western District of N.C.	Motley Rice	WEL
129	RG 13687336	Kent Campbell v. Allied Packing et al.	Alameda County Superior Court, CA	Kazan McClain Satterley & Greenwood	WEL
130	CGC13276217	Harold Koepke v. Ford Motor Co.	San Francisco Co. Superior Ct.	Kazan McClain Satterley & Greenwood	WEL
131	13-2-08978-5	Richard Stefanson v. The Boeling Co.	Superior Ct. King County, WA	Bergman Draper Ladenburg	WEL
132	C20133499	Tank Hale v. American Standard	Pima County, AZ	Nemeroff Law Firm	WEL
133	3:14-cv-01096-BJD-JBT	Janet Voelker	Erie County, NY	Simon Greenstone Panatier Bartlett	MDM
134	1422-CC00819	Ava Campbell v. Ford Motor Co.,	St. Louis, MO	Bailey Peavey Bailey	MDM
135	C14-5588 RBL	Gregory Cannard v. CBS Corp.,	U.S. Dist. Court, Western Dist. Of Washington at Tacoma	Bergman Draper Ladenburg & Hart	WEL
136	13-3009	Wilford Knighton v. Freeport Sulphur Co., et al.	Civil District Ct. for Orleans Parish, State of Louisiana	Nemeroff Law Firm	WEL
137	BC 497405	Geraldine Fraser v. Boething Treeland Nursery, et al.	Los Angeles, CA	Hunton & Williams	WEL
138	RG13 701633	Richard Ortwein v. Certainteed Corp., et al.	Alameda County, CA	Kazan McClain Satterley Greenwood	WEL
139	15-2-10986-3	Susan Page v. Asbestos Corp., et al.	King County, WA	Bergman Draper Ladenburg Hart	WEL
140	RG15797638	Edward Espinosa v. CertainTeed	Alameda County, CA	Kazan McClain Satterley	WEL

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

		Corp., et. Al.		Greenwood	
141	14-2-21662-9 SEA	Barbara Brandes v. Brand Insulation & Kaiser Gypsum Co., et al.	Court of Appeals of the State of Washington, Seattle	Bergman Draper Ladenburg	WEL
142	190109/2015	Jeanne Evans v. 3M Co., et al.	Supreme Ct. of the State of New York, New York County	Simon Greenstone Panatier & Bartlett	WEL
143	BC 538462	Mettias, Febi v. Arby's, et al.	Superior Court for Los Angeles County, GA	Dean Omar Branham	WEL
144	24X15000318	Raymond Greenhill (Estate of Concetta Schatz, et al.	Circuit Court for Baltimore City, MD	Peter Angelos Law Office	WEL
145	2015-9041	Garcia, Robert v. Exxon Mobile, et al.	Civil Dist. Court for Parish of Orleans, Louisiana	Baron Budd	WEL
146	RG 16819332	Burch, Michael v. CertainTeed Corp., et al.	Superior Court of Alameda County, GA	Kazan McClain Satterley Greenwood	WEL
147	RG 15797638	Espinosa, Edward v. CertainTeed Corp., et al.	Superior Court Alameda County, CA	Kazan McClain Satterley Greenwood	WEL
148	RG 15796166	Booker, Richard v. BASF Catalysts, et al.	Superior Court Alameda County, CA	Kazan McClain Satterley Greenwood	WEL
149	BC 646315	Herford, Tina v. AT & T, et al.	Superior Court of Los Angeles, CA	Simon Greenstone Panatier & Bartlett	WEL
150	10CA- CVO1079	Gunter, Thomas v. Terri Milliam, et al.,	Circuit Court of Cass County, Harrisonville, MO	Humphrey Farrington	WEL
151	812822/2016	Bernacki, Ralph v. Asbestos Corp., et al.	Supreme Court of State of NY, Erie County	Lipsitz & Ponterio	WBE
152	16-2-15978-8 SEA	Esvelt, Jack v. Certainteed Corp., et al.	Superior Court of Washington, King County	Simmons HanlyConroy	MWR
153	190349/15	Rosa, Anthony v. Asbeka Industries, et al.	Supreme Court of New York, NY	Levy Konigsberg	WEL
154	16-2-21021-0 SEA	Brooke, James v. Lone Star Industries, et al.	Superior Court of Washington, King County	Bergman Draper Oslund	WEL
155	CL1603266T1	Mullinax, Herbert	Newport News, VA	Patten Worman Hatten	WEL

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

				Diamonstein	
156	Mid-L-7385-16AS	Lanzo, Stephen v. Cypress Amaz, et al.,	Superior Court of Middlesex County, NJ	Levy Konigsberg	WEL
157	BC 53712	Ortiz, Nemecio/Gomez, Hortencia	Santa Monica, CA	Dean Omar Branham	WEL
158	1522-CC10417	Ingham, Gail	St. Louis, MO	Lanier Law Firm	WEL
159	4:17cv9	Goodrich, Harry v. Air & Liquid Systems, et al.	U.S. Dist. Ct., Eastern Dist of Virginia, Newport News Div.	Patten Worom Hatten Diamonstein	WEL
160	MID-L-1748-17AS	Henry, Rosalind v. Brenntag North America, et al.	Superior Court of New Jersey, Middlesex County	Motley Rice	WEL
161	3854/2016	Shields, Paul v. American Biltrite, Inc., et al.	Supreme Court of NY, Seventh Judicial District, Monroe County	Levy Konigsberg	WBE
162	24X14000295	Ament, Richard v. AC&S, Inc., et al.	Circuit Court for Baltimore City, MD	Law Offices of Peter Angelos	WEL
163	24x160000054	Boston, Henry v. AC&S, Inc., et al.	Circuit Court for Baltimore City, MD	Law Offices of Peter Angelos	WEL
164	DR180132	Allen, Carla v. Brenntag North America, Inc., et al.	Superior Court of CA, County of Humboldt	Simon Greenstone Panatier	WEL
165	18-2-15767-1 SEA	Berkshire, Richard v. SYD Carpenter Marine Contractors, et al.	King County, WA	Bergman Draper Oslund	WEL
166	RG17880698	Barr, Barbara v. A-1 Clutch Co.	Alameda County, CA	Maune Raichle Hartley French Mudd	WEL
167	190328/2017	Olson, Donna v. Brenntag North America, Inc., et al.	Supreme Court of NY, New York County	Levy Konigsberg	WEL
168	MID-L-02912-17	Rimondi, Ricardo v. BASF Catalysts LLC, et al.	Middlesex County, NJ	Lanier Law Firm	WEL
169	CJ-2017-3487	Pipes, Sharon v. Johnson & Johnson, et al.	District Court for Oklahoma County, Oklahoma	Simon Greenstone Panatier	WEL
170	16 AO-CC00095	Comer, Elizabeth v. CBS Corporation, et al.	Jasper County Circuit Court, Joplin, MO	Baron Budd	WEL

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William B. Egeland, M.S., P.G., Mark W. Rigler, Ph.D.**

171	JCCP 4674/BC67764	Blinkinsop, Robert . Albertson's Companies, et al.	Superior Court for State of California, Los Angeles	Weitz & Luxenberg	WEL
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Exhibit 72

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA

2 FOR THE COUNTY OF LOS ANGELES

3 DEPARTMENT NE R HON. C. EDWARD SIMPSON, JUDGE

4
5 CONSOLIDATED PROCEEDINGS
6 SPECIAL TITLE (RULE 3.550)

7 LAOSD ASBESTOS CASES

8 TINA HERFORD AND DOUGLAS HERFORD,

9 Plaintiffs,

10 vs.

11 AT&T CORP., a subsidiary of AT&T
12 INC. and its subsidiary PACIFIC
13 BELL TELEPHONE COMPANY, et al.,

14 Defendants.

) JCCP Case No. 4674

) Case No. BC646315

15
16 REPORTER'S TRANSCRIPT OF PROCEEDINGS

17 SEPTEMBER 27, 2017

18
19 APPEARANCES:

20 For Plaintiffs:

21 SIMON GREENSTONE PANATIER BARTLETT
22 BY: CHRISTOPHER J. PANATIER, ESQ.
23 LEAH C. KAGAN, ESQ.
24 3780 KILROY AIRPORT WAY, SUITE 540
25 LONG BEACH, CALIFORNIA 90806
26 (562) 590-3400

27 SIMON GREENSTONE PANATIER BARTLETT
28 BY: JAY STUEMKE, ESQ.
3232 MCKINNEY AVENUE, SUITE 610
DALLAS, TEXAS 75204

(Appearances, Continued Next Page)

27 REPORTED BY:

28 DEBORAH MORIN, CSR NO. 11558
OFFICIAL REPORTER PRO TEMPORE

1 APPEARANCES OF COUNSEL: (Continued)

2
3 For Johnson & Johnson: KING & SPALDING
4 BY: ALEXANDER G. CALFO, ESQ.
5 JULIA E. ROMANO, ESQ.
6 655 WEST FIFTH STREET, 17TH FLOOR
7 LOS ANGELES, CALIFORNIA 90071
8 (213) 443-4347

9 -AND-

10 TUCKER ELLIS, LLP
11 BY: SHARLA J. FROST, ESQ.
12 GWENDOLYN S. FROST, ESQ.
13 405 Main Street, Suite 500
14 Houston, Texas 77002
15 (281) 657-0732

16 ORRICK, HERRINGTON & SUTCLIFFE, LLP
17 BY: MORTON DONALD DUBIN II, ESQ.
18 51 West 52nd Street
19 New York, New York 10019
20 (212) 506-3752

21 For IMERYS TALC AMERICA AND CYPRUS AMAX:

22 ALSTON & BIRD
23 BY: TODD B. BENOFF, ESQ.
24 PETER E. MASAITIS
25 333 SOUTH HOPE STREET, 16TH FLOOR
26 LOS ANGELES, CALIFORNIA 90071
27 (213) 576-1000
28

1 THE COURT: First, I don't think a 402 hearing
2 is necessary. There has been a tremendous number of
3 documents attached to the opposition to the motion.
4 There's a number of documents that have been attached to
5 the motion itself. As I indicated earlier, I believe
6 that what is admissible is what Dr. Longo tested, what
7 the results of his tests were.

8 I think he can opine as to whether or not
9 those results are consistent with his review of
10 Johnson & Johnson documents, but what he cannot do and
11 what I don't think is admissible is his extrapolation of
12 his test results to the party -- to the talc that was
13 actually used by the plaintiff over a long period of
14 time. It's circumstantial evidence. The jury will have
15 to decide.

16 His video, I think, doesn't seem to be any
17 controversy over that. It's certainly not admissible.
18 But I think his methodology finds support in the
19 science. It seems to me that the science may not be in
20 agreement as to the appropriate methodologies. It's
21 almost like a medical malpractice case in which a doctor
22 cannot be criticized by using one method of treatment if
23 another method of treatment would have produced a better
24 or a different result if the two methods are appropriate
25 methods.

26 And I think here we have a controversy between
27 the experts as to whether or not the methods are
28 acceptable methods, and the lawyers and the jury are

1 going to have to just sort that out amongst themselves.

2 Let's see if we can move along to No. 4 is to
3 exclude certain opinions of Dr. Gordon.

4 My understanding is that Dr. Gordon examined a
5 lymph node from the plaintiff. He wants to give us his
6 opinion as to what he found in that examination. He
7 wants to tell us that the disease that he found in the
8 lymph node can be found in the exposure to cosmetic
9 talcum powder. He apparently used some type of a
10 control group in his studies to arrive at opinions.

11 We also have the problem of the samples that
12 he tested. My preliminary thoughts are that what is not
13 admissible -- I'm not so sure it's his opinion that the
14 tissues that he examined from the lymph node correlate
15 with the plaintiff's use of cosmetic talc. I don't know
16 if there's an underlying science that would support that
17 opinion. He has an opinion that cleavage fragments can
18 cause asbestos-related disease.

19 So in a nutshell, Mr. Benoff, what's the focal
20 point of the motion?

21 MR. MASAITIS: Good morning, Your Honor.
22 Peter Masaitis for Imerys and Cyprus.

23 So I have three distinct issues I'd like to
24 direct the Court's attention to on the Dr. Gordon
25 motion. And I think it would make sense to start with
26 the simplest and the cleanest first.

27 So Dr. Gordon bases his causation opinion, his
28 opinion that Mrs. Herford's mesothelioma was caused by

Exhibit 73

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION, CIVIL PART
MIDDLESEX COUNTY
DOCKET NO. L-7385-16AS
A.D.#

STEPHEN LANZO, III, AND
KENDRA LANZO,

Plaintiff,

vs.

CYPRUS AMEX MINERALS CO.,
INC., ET AL.,

Defendant.

TRANSCRIPT
OF
DECISION ON MOTION

Place: Middlesex County Courthouse
56 Paterson Street
New Brunswick, New Jersey 08903

Date: December 22, 2017

BEFORE:

HONORABLE ANA C. VISCOMI, J.S.C.

TRANSCRIPT ORDERED BY:

LAUREN DI STEFANO, PARALEGAL (Levy Konigsberg)

1 APPEARANCES:

2 MOSHE MAIMON, ESQ.
3 (Levy Konigsberg)
4 Attorney for the Plaintiff

5 JOSEPH SATTERLEY, ESQ.
6 (Kazan, McClain, Satterley & Greenwood)
7 Attorney for the Plaintiff

8 JACK N. FROST, ESQ.
9 STEPHEN R. LONG, ESQ.
10 (Drinker Biddle & Reath)
11 Attorneys for the Defendant, Johnson & Johnson

12 MIKE BROCK, ESQ.
13 (Kirkland & Ellis)
14 Attorney for the Defendant, Johnson & Johnson

15 LINDA DOBBINS, ESQ.
16 (Rawle & Henderson)
17 Attorney for the Defendant, Cyprus Amax, Imerys Talc

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25 Transcriber, Sherry M. Bachmann
G&L TRANSCRIPTION OF NJ
40 Evans Place
Pompton Plains, New Jersey 07444

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Sound Recorded
Recording Operator,

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I N D E X

PROCEEDING

PAGE

Judge's Decision on Motion

4

1 THE COURT: We're going to go on the record
2 now. I'll introduce the case, and then you'll enter
3 your appearances, again. Good afternoon. We're here
4 with regard to the matter of STEPHEN AND KENDRA LANZO
5 V. CYPRUS AMAX MINERALS COMPANY, ET AL., docket number
6 7385-16. Could I have appearances, please, on behalf
7 of the plaintiffs.

8 MR. MAIMON: Good afternoon, Your Honor.
9 Moshe Maimon and Joseph Satterley for the Lanzas.

10 THE COURT: On behalf of the defendants,
11 Cyprus Amax Minerals and Imerys, respectively.

12 MS. DOBBINS: Linda Dobbins from Rawle &
13 Henderson.

14 THE COURT: And on behalf --

15 MR. BROCK: Mike Brock from Kirkland &
16 Ellis --

17 THE COURT: Thank you.

18 MR. BROCK: -- for J&J.

19 THE COURT: Thank you. And on behalf of --
20 go ahead.

21 MR. FROST: I was going to say, also on
22 behalf of Johnson & Johnson, Your Honor, are Jack Frost
23 and Steve Long from Drinker Biddle & Reath.

24 THE COURT: Thank you. Is that now everyone?
25 Yes.

1 MR. FROST: Yes. I believe that's the
2 quorum, Your Honor.

3 THE COURT: All right. Great. Thank you.
4 So this is a telephonic, in part, prehearing conference
5 but, also, for the Court to issue its ruling with
6 regard to the defendants, Johnson & Johnson entities
7 and Cyprus and Amax Imerys' motion to preclude all
8 testimony and evidence regarding the purported testing
9 of talc by plaintiff's experts based on lack of
10 authenticity.

11 As you may recall, the Court heard testimony
12 from Dr. Longo, plaintiff's expert, with regard to
13 these matters and the motion was well argued by Counsel
14 and I want to thank you for that.

15 I've taken time to review this Court's prior
16 ruling in FISHBEIN and SCHOENIGER (phonetic), reviewed,
17 again, the testimony of Dr. Longo before this Court, as
18 well as reviewing, again, his report and his
19 certification in support of the opposition to the
20 preclusion of the testing that he conducted.

21 So by way of background, as you may recall,
22 as far as this Court is concerned, the issue started
23 with FISHBEIN. In that case, there was a series of
24 samples as they related to different defendants, than
25 the defendants herein that were obtained by various law

1 firms and one plaintiff to a non-New Jersey matter.
2 The bulk of the samples were attained by way of EA.

3 The Court heard testimony in relation to the
4 samples from Dr. -- essentially, from Mr. Fitzgerald
5 and, also, Dr. Weber and the Court had the benefit,
6 also, of testimony presented in the context of a
7 deposition from Dr. Longo as well.

8 And by way of background from that decision,
9 Dr. Longo had opined that tampering with products would
10 be a virtual impossibility. Dr. Weber testified it
11 would be impossible to imagine how the sample -- the
12 results that are obtained by Mr. Fitzgerald would have
13 been consistent. So he testified it would be
14 impossible to imagine how these would have been
15 consistent with the results that Mr. Fitzgerald
16 produced, in other words, if tampering had occurred and
17 the defendants urged the Court to reject affidavits
18 that were supplied where there was no benefit of
19 testimony before the Court.

20 The Court had concern about the samples
21 because not so much -- not indeed as it related to what
22 happened with them after the attorneys obtained the
23 samples from the various means, but the providence of
24 the samples where they had been for potential decades.
25 The Court also noted in Page 8 of its decision with

1 regard to the samples, Mr. Maimon submitted a
2 certification as to chain of custody with regard to
3 three product samples certifying them to be authentic
4 and not having them tampered or adulterated and, with
5 all due respect to Mr. Maimon, I mean, certainly, one
6 could opine that after he obtained the samples while
7 they were in his control but certainly not beforehand
8 or --

9 So the Court did not permit any of those
10 samples short of vintage samples, which were -- which
11 were with regard to the store samples. The Court did
12 not permit any of those samples in. While the
13 plaintiff's expert, Dr. Weber, testified that Mr.
14 Fitzgerald could not have deliberately tampered with
15 the talc to achieve consistent results he reported, the
16 Court was nonetheless concerned about the providence of
17 that.

18 What was -- in utilizing the standard that
19 the Court must consider in these cases, under Rule 901,
20 the Court ruled as follows. Rule 901 places the burden
21 of chain of custody on the parties seeking to introduce
22 the evidence. Foundational requirement is such that it
23 generally should include a showing of uninterrupted
24 chain of possession. And for further commentary, see
25 Rule 9-- New Jersey Rule of Evidence 901, which also

1 cites, STATE V. MORTON at 155 N.J. 383 (1999) Supreme
2 Court case at Page 446.

3 Evidence should generally be admitted if the
4 trial Court "finds a reasonable probability that the
5 evidence has not been changed in important respects or
6 it is in substantially the same condition as when the
7 crime was committed. And see the commentary to Rule
8 901, citing STATE V. BROWN at 99 N.J. Super. 22 at Page
9 28, Appellate Division 1958.

10 A defect in the chain of custody goes to
11 weight and admissibility of evidence, citing MORTON at
12 Page 446. The rule annunciated in BROWN, which was a
13 criminal case, has been held to apply in the context of
14 civil cases, for example, MIDDLESEX HEALTH DEPARTMENT
15 V. IMPORTICO, at 315 N.J. Super. 397, Law Division case
16 from 1998.

17 In that case, the Court found that although a
18 break in chain of custody had occurred, based upon the
19 testimony presented, the Court found that the evidence
20 had not been materially altered and remained in
21 substantially the same condition as when the inspectors
22 first took it from waste loads. The cases regarding
23 chain of custody and authentication, primarily relate
24 photographs, machines, et cetera, and are instructive,
25 particularly because of the passage of time.

1 So, here, in -- after the Court decided
2 FISHBEIN, the Court had occasion to review its decision
3 in the context of SCHOENIGER. SCHOENIGER, as you may
4 recall, involved Colgate-Palmolive and Cashmere Bouquet
5 samples and, in that case, the Court determined to
6 allow certain samples in and those were the samples in
7 which the plaintiff's expert, who had been retained in
8 that case, had to break open a seal in order to access
9 the talcum powder, the Court finding that there was
10 under Rule 901, an indicia of reliability, an indicia
11 of that the contents contained therein are what they
12 purport to be.

13 And so, now, we look at the development of
14 the presentation of the matters of the samples before
15 the Court where we began FISHBEIN, then SCHOENIGER and,
16 now, for the very first time, as to Johnson & Johnson
17 and, also, Shower to Shower.

18 So as to the Johnson & Johnson products, the
19 Court heard testimony from Dr. Longo. The Court read
20 the pleadings and heard oral argument of Counsel and,
21 also, the Court viewed the YouTube video that came in
22 as part of their reply in which a person shows how one
23 can refill a small container, the smaller bottles of
24 the J&J, I guess, what are considered the travel size
25 by taking product -- other product, presumably, a more

1 -- a less expensive product, fill a plastic bag and
2 then using what is, I guess, considered a vacuum type
3 procedure, fill the travel size bottle part way.

4 What the Court found compelling was the
5 testimony of Dr. Longo insofar as he found that by
6 doing the testing, the consistency of the product
7 throughout and some of the tests that he conducted
8 revealed the presence of asbestos. Some did not and so
9 based upon his argument as to the consistency, which
10 the Court found compelling, as to it being an indicia
11 of reliability, the Court finds that it would be
12 appropriate to deny the motion to exclude, allow the
13 testimony in, but cert-- allow the testing in but,
14 certainly, there are issues that would go to the weight
15 of the evidence.

16 The issue, for example, of consistency, the
17 Court notes is contested. The issue with the regard to
18 the ability to refill the products is contested. You
19 may recall that Dr. Longo testified that it is -- it is
20 difficult, if not impossible, to open up the plastic
21 containers without showing evidence of tampering where
22 the bottle is opened.

23 With regard to the J -- the Shower to Shower
24 samples, which are during the timeframe that post-date
25 -- the Court -- post-date potentially manufactured by

1 Johnson & Johnson. The Court is still open to
2 exclusion on that. The Court is not satisfied from
3 that which has been submitted -- and I looked at the
4 pictures that were provided and, perhaps, you can point
5 me to other pictures. But during -- during the
6 timeframe that that product was used allegedly by the
7 plaintiff, Mr. Lanzo, it's unknown to the Court from
8 review of everything that's been submitted whether J&J
9 still manufactured the product or whether it went
10 beyond the licensing agreement or whether or not
11 Valiant was the actual manufacturer.

12 I mean, certainly, to the extent that J&J no
13 longer manufactured Shower to Shower during that time
14 period, those samples from that time period were not
15 able to be used in this case. Are there any questions
16 at this time with regard to the Court's ruling?

17 MR. MAIMON: None from the plaintiff, Your
18 Honor.

19 MR. FROST: None for defendants either, Your
20 Honor.

21 THE COURT: Okay. If we could get
22 clarification on that with regard to the Shower to
23 Shower prior to openings, the Court will certainly
24 amend its ruling with regard to that time. At this
25 point in time, it's open but the Court would like to

1 resolve that before we get to opening statements. So
2 tell --

3 MR. FROST: Absolutely, Your Honor. We will
4 -- we'll put together a letter with a submission that
5 should satisfy the Court one way or the other.

6 THE COURT: I appreciate that. Now, as you
7 know, the Court is in recess between this afternoon and
8 January 2 when we return. I've indicated that if you
9 need to reach out to me, I expect that at least one
10 member of my staff will be here during that time and
11 they're able to reach out to me in the event that you
12 do need to do so before I return.

13 I have a non-asbestos matter that I'm dealing
14 with at three o'clock today. Is there anything else
15 that you would like to discuss at this time?

16 MR. FROST: Yes, Your Honor. We have a
17 couple of different things that we want to discuss with
18 Your Honor.

19 THE COURT: Sure.

20 MR. FROST: I'll start with the easiest one.
21 We've met and conferred as to the number of alternates
22 to seat as well as the number of preemptory challenges.

23 THE COURT: Okay.

24 MR. FROST: And we've come to the decision of
25 -- we'll tell you the parties' positions and both sides

CERTIFICATION

I, SHERRY M. BACHMANN, the assigned transcriber, do hereby certify the foregoing transcript of proceedings, time from 1:34 p.m. to 1:55 p.m., is prepared in full compliance with the current Transcript Format for Judicial Proceedings and is a true and accurate non-compressed transcript of the proceedings as recorded.

Sherry Bachmann

SHERRY M. BACHMANN AOC #454
G&L TRANSCRIPTION OF NJ

Date: December 28, 2017

Exhibit 74

Trial Day 14 AM Session on May 15, 2018
Anderson, et al. vs. Borg Warner Corporation, et al.

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF LOS ANGELES
DEPARTMENT 2 HON. GLORIA WHITE-BROWN, JUDGE

COORDINATED PROCEEDING) JCCP NO. 4674
SPECIAL TITLE (RULE 3.550))
)
LAOSD ASBESTOS CASES)
)
)
JOANNE ANDERSON AND GARY ANDERSON,)
) CASE NO. BC666513
)
) PLAINTIFFS,)
) PAGES 1689 - 1785
)
VS.)
)
BORG-WARNER CORPORATION BY ITS)
SUCCESSOR-IN-INTEREST BORG-WARNER)
MORSE TEC, INC., ET AL.,)
)
) DEFENDANTS.)
)
)

A.M. SESSION
REPORTER'S TRANSCRIPT OF PROCEEDINGS
MAY 15, 2018

APPEARANCES:

FOR THE PLAINTIFFS: SIMON GREENSTONE PANATIER BARTLETT
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(APPEARANCES CONTINUED NEXT PAGE)

REPORTED BY: DEBORAH MORIN, CSR NO. 11558
OFFICIAL REPORTER PRO TEMPORE

Trial Day 14 AM Session on May 15, 2018
Anderson, et al. vs. Borg Warner Corporation, et al.

2 (Pages 2 to 1690)

<p>1 APPEARANCES OF COUNSEL: (CONTINUED)</p> <p>2</p> <p>3 FOR THE DEFENDANTS BAILEY CROWE KUGLER & ARNOLD, LLP</p> <p>4 JJCI: CORI CUDABAC STEINMANN, ESQ.</p> <p>5 6550 BANK OF AMERICA PLAZA</p> <p>6 901 MAIN STREET</p> <p>7 DALLAS, TEXAS 75202</p> <p>8</p> <p>9 -AND-</p> <p>10</p> <p>11 KING & SPALDING</p> <p>12 BY: ALEXANDER G. CALFO, ESQ.</p> <p>13 633 WEST FIFTH STREET</p> <p>14 SUITE 1700</p> <p>15 LOS ANGELES, CALIFORNIA 90071</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p>	<p>Page 1689</p> <p>1 CASE NAME: ANDERSON VS. BORG-WAWRNER CORP.</p> <p>2 CASE NUMBER: BC666513</p> <p>3 WEST COVINA, CALIFORNIA MAY 15, 2018</p> <p>4 DEPARTMENT 2 HON. GLORIA WHITE-BROWN</p> <p>5 REPORTER: DEBORAH MORIN, CSR NO. 11558</p> <p>6 APPEARANCES: (AS HERETOFORE MENTIONED.)</p> <p>7 TIME: 9:01 A.M.</p> <p>8</p> <p>9 (THE FOLLOWING PROCEEDINGS HELD IN OPEN</p> <p>10 COURT OUTSIDE THE PRESENCE OF THE JURY:)</p> <p>11</p> <p>12 THE COURT: GOOD MORNING. WE'RE GOING TO GO</p> <p>13 ON THE RECORD IN THE JOANNE ANDERSON AND GARY ANDERSON</p> <p>14 VERSUS JOHNSON & JOHNSON AND JOHNSON & JOHNSON CONSUMER</p> <p>15 INCORPORATED, CASE NO. 666513.</p> <p>16 MAY THE RECORD REFLECT WE ARE OUTSIDE THE</p> <p>17 PRESENCE OF THE JURORS AND ALTERNATE JURORS. WE HAVE</p> <p>18 PLAINTIFFS' COUNSEL PRESENT, MR. CONOR NIDEFFER,</p> <p>19 MR. DAVID GREENSTONE AND MR. CHRIS PANATIER. AND FOR</p> <p>20 DEFENSE WE HAVE MR. ALEXANDER CALFO, MR. MEL BAILEY AND</p> <p>21 MS. CORI STEINMANN.</p> <p>22 MR. PANATIER: YOUR HONOR, BEFORE I FORGET,</p> <p>23 WHAT WAS PLAYED YESTERDAY, WE'RE JUST GOING TO MARK IT</p> <p>24 AS PLAINTIFFS' COURT 3, WHICH WAS THE SECTION WE STARTED</p> <p>25 YESTERDAY, JUST SO WE HAVE THAT ON THE RECORD.</p> <p>26 THE COURT: ALL RIGHT. SO THAT WILL BE MARKED</p> <p>27 PLAINTIFFS' 3. THAT'S THE TRANSCRIPT; CORRECT?</p> <p>28 MR. PANATIER: YES, YOUR HONOR. THAT'S THE</p>
<p>1 INDEX</p> <p>2</p> <p>3 MAY 15, 2018; A.M. SESSION</p> <p>4</p> <p>5 CHRONOLOGICAL INDEX OF WITNESSES</p> <p>6</p> <p>7 PLAINTIFFS' DIRECT CROSS REDIRECT RECROSS</p> <p>8 LONGO, WILLIAM 1713</p> <p>9</p> <p>10</p> <p>11 DEFENDANT'S DIRECT CROSS REDIRECT RECROSS</p> <p>12 (NONE)</p> <p>13</p> <p>14</p> <p>15 EXHIBITS</p> <p>16 PLAINTIFF'S MARKED RECEIVED WITHDRAWN</p> <p>17 EXHIBIT FOR I.D. IN EVD. OR REJECTED</p> <p>18 3 - JOHN HOPKINS VIDEO 1690</p> <p>19 DEPO TRANSCRIPT</p> <p>20 860 - LONGO C.V. 1714</p> <p>21 928 - BLOUNT ARTICLE 1733</p> <p>22 931 - 1995 COUNTING 1772</p> <p>23 PROTOCOL</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> <p>101</p> <p>102</p> 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<p>1 TESTIFY ABOUT TESTING THAT HE'S DONE ON A SERIES OF</p> <p>2 JOHNSON & JOHNSON BOTTLES RANGING FROM SOMEWHERE BETWEEN</p> <p>3 1953 IN VINTAGE TO -- UP TO THE ANDERSON BOTTLES THAT I</p> <p>4 GUESS ARE IN 2004 TIME FRAME.</p> <p>5 THESE BOTTLES, AS YOU CAN TELL FROM THE</p> <p>6 MOTION, CAME FROM ALL SOURCES: EBAY, PLAINTIFFS'</p> <p>7 LAWYERS. I THINK THERE ARE SERIOUS QUESTIONS ABOUT THE</p> <p>8 CHAIN OF CUSTODY.</p> <p>9 THE CHAIN OF CUSTODY WHEN WE'RE TALKING ABOUT</p> <p>10 TESTING A BOTTLE FROM SOME TIME BEFORE 1953 DOES NOT</p> <p>11 BEGIN WHEN IT SHOWS UP AT A LAWYER'S OFFICE. IT BEGINS,</p> <p>12 IN A CASE LIKE THIS, YOU WOULD THINK, TRACKING THE</p> <p>13 BOTTLE BACK TO THE POINT WHERE WE COULD BE SURE THAT</p> <p>14 WHAT'S INSIDE OF THAT BOTTLE THAT'S 50, 60, 70 YEARS OLD</p> <p>15 IS SIMILAR TO WHAT MS. ANDERSON CLAIMS TO HAVE BEEN</p> <p>16 EXPOSED TO.</p> <p>17 FOR A NUMBER OF THESE, ALMOST EVERY ONE OF</p> <p>18 THESE, OTHER THAN THE ANDERSON BOTTLES, THERE'S NO</p> <p>19 TESTIMONY AT ALL ON THE RECORD, NOR WILL THERE EVER BE,</p> <p>20 ABOUT WHERE THESE BOTTLES CAME FROM, WHERE THEY WERE</p> <p>21 STORED, HOW THEY WERE USED. THE CHAIN OF CUSTODY JUST</p> <p>22 SIMPLY DOES NOT EXIST UNTIL SOME LAWYER BOUGHT THEM AND</p> <p>23 PROVIDED THEM TO DR. LONGO.</p> <p>24 THE COURT: LET ME TELL YOU -- LET ME --</p> <p>25 BEFORE YOU PROCEED, LET ME GIVE YOU MY TENTATIVE ON THIS</p> <p>26 FIRST AND THEN I'LL HEAR FROM COUNSEL.</p> <p>27 MR. BAILEY: SURE.</p> <p>28 THE COURT: OKAY. SO I AM FAMILIAR WITH THIS</p>	<p>1 HOWEVER, THERE STILL APPEARS TO BE A CHAIN OF CUSTODY</p> <p>2 ISSUE. THERE ALSO, MORE IMPORTANTLY, APPEARS TO BE A</p> <p>3 RELEVANCE ISSUE IN REGARDS TO THOSE ITEMS.</p> <p>4 AS TO THE TWO BABY POWDER BOTTLES THAT</p> <p>5 PLAINTIFFS PROVIDED, I FIND THAT THERE IS NO CHAIN OF</p> <p>6 CUSTODY ISSUE REGARDING THOSE BECAUSE THE PLAINTIFFS</p> <p>7 CAME IN. THEY TESTIFIED AS TO THOSE BOTTLES.</p> <p>8 COUNSEL WAS ABLE TO QUESTION ABOUT THOSE</p> <p>9 BOTTLES, HOW THEY WERE STORED, THINGS OF THAT SORT. AND</p> <p>10 THAT INFORMATION IS BEFORE THE JURY, AND I THINK FOR</p> <p>11 PURPOSES OF THIS TRIAL, THE ANALYZATION OF THOSE TWO</p> <p>12 BOTTLES, THE COURT WILL ALLOW TESTIMONY REGARDING THOSE</p> <p>13 TWO BOTTLES BECAUSE OF THE BACKGROUND ON THOSE BOTTLES</p> <p>14 THAT WAS TESTIFIED TO IN REGARDS TO -- IN REGARDS TO HOW</p> <p>15 THEY WERE KEPT, WHERE THEY WERE KEPT, THINGS OF THAT</p> <p>16 SORT, EVEN THOUGH THERE WAS SOME QUESTION REGARDING SOME</p> <p>17 OF THE STORAGE, BUT I THINK THERE WAS SUFFICIENT</p> <p>18 FOUNDATION LAID REGARDING THOSE TWO BOTTLES.</p> <p>19 THE COURT DOES NOT HAVE A PROBLEM WITH THE</p> <p>20 BOTTLES THAT WERE ACTUALLY PURCHASED FROM STORES AS IT</p> <p>21 APPEARS THAT THOSE BOTTLES WERE PURCHASED IN A BRAND-NEW</p> <p>22 STATE. I BELIEVE IT WAS -- THERE WAS INFORMATION THAT</p> <p>23 THEY WERE SEALED, PROPERLY SEALED. AND THOSE ITEMS WERE</p> <p>24 THEN TESTED. AND SO THERE DOES NOT APPEAR TO BE A CHAIN</p> <p>25 OF CUSTODY ISSUE OR RELIABILITY ISSUE IN REGARDS TO</p> <p>26 THOSE PARTICULAR ITEMS, AND AUTHENTICITY ISSUE IS ALSO</p> <p>27 AT THE CRUX OF THESE ITEMS.</p> <p>28 IN REGARDS TO THE BOTTLES FROM OTHER LAW</p>
Page 1692	Page 1694
<p>1 MOTION. I DID READ IT IN ITS ENTIRETY, AND THE COURT'S</p> <p>2 TENTATIVE WOULD BE -- AND THERE'S ABOUT TWO OR THREE</p> <p>3 PARTS TO THE COURT'S RULING.</p> <p>4 BUT IN REGARDS TO THE CHAIN OF CUSTODY ISSUE,</p> <p>5 THE EVALUATION ISSUE, THE COURT DOES HAVE A REAL ISSUE</p> <p>6 WITH THE CHAIN OF CUSTODY AND THE FRY STANDARD. I THINK</p> <p>7 THERE IS, BASED UPON EVERYTHING THAT I READ, NO</p> <p>8 SUFFICIENT CHAIN OF CUSTODY IN REGARDS TO A MAJORITY OF</p> <p>9 THE BABY POWDER PRODUCTS THAT WERE TESTIFIED BY</p> <p>10 DR. LONGO. IN PARTICULAR, I DO SEE A REAL ISSUE WITH</p> <p>11 THE EBAY ITEMS.</p> <p>12 THERE IS NO CHAIN OF CUSTODY OTHER THAN THE</p> <p>13 FACT THAT THESE WERE PURCHASED ON AN EBAY. WE DON'T</p> <p>14 KNOW HOW THEY WERE STORED. WE DON'T KNOW WHETHER OR NOT</p> <p>15 IT'S THE ORIGINAL PRODUCT. YOU DON'T KNOW WHAT</p> <p>16 CONDITIONS THEY WERE STORED IN AND THINGS OF THAT SORT.</p> <p>17 SO THERE'S A REAL PROBLEM WITH THE EBAY BABY POWDER</p> <p>18 SAMPLES THAT WERE TESTED.</p> <p>19 I ALSO FIND A PROBLEM IN REGARDS TO ITEMS THAT</p> <p>20 WERE TESTED BEFORE THE TIME PERIOD THAT MRS. ANDERSON</p> <p>21 WAS EXPOSED TO THE BABY POWDER AT ISSUE IN THIS CASE,</p> <p>22 WHICH SHE INDICATES STARTED SOMETIME IN THE EARLY 1970S</p> <p>23 WHEN SHE HAD HER FIRST CHILD.</p> <p>24 THERE'S ALSO THE CHAIN OF CUSTODY AND</p> <p>25 RELIABILITY ISSUES REGARDING THOSE, I'LL CALL THEM</p> <p>26 HISTORICAL BOTTLES AS WELL, SINCE THERE IS A QUESTION AS</p> <p>27 TO HOW THEY WERE STORED AS WELL. I UNDERSTAND THAT SOME</p> <p>28 OF THEM DID COME FROM MUSEUMS AND THINGS OF THAT SORT.</p>	<p>1 FIRMS, I HAD THE SAME ISSUES. THE COURT SEES THE SAME</p> <p>2 ISSUES IN REGARDS TO RELIABILITY AND AUTHENTICITY OF</p> <p>3 CHAIN OF CUSTODY.</p> <p>4 ONCE AGAIN, THE FACT THAT THEY WERE RECEIVED</p> <p>5 FROM OTHER LAW FIRMS, THAT'S ONLY PART OF THE CHAIN OF</p> <p>6 CUSTODY. WHERE THEY CAME FROM BEFORE THAT -- THERE DOES</p> <p>7 NOT APPEAR TO BE ANY TESTIMONY REGARDING -- THERE WILL</p> <p>8 NOT BE ANY TESTIMONY REGARDING WHERE THOSE CAME FROM,</p> <p>9 HOW THEY WERE STORED, WHAT MANNER THEY WERE STORED IN,</p> <p>10 THINGS OF THAT SORT.</p> <p>11 I THINK THERE WAS ONE BOTTLE. I CAN'T RECALL.</p> <p>12 I BELIEVE IT WAS FROM ANOTHER PLAINTIFF'S COUNSEL WHERE</p> <p>13 THERE WAS SOME INFORMATION PROVIDED REGARDING CHAIN OF</p> <p>14 CUSTODY THAT IT CAME FROM -- I CAN'T RECALL RIGHT OFF</p> <p>15 THE TOP OF MY HEAD, BUT I KNOW THERE WAS ONE BOTTLE THAT</p> <p>16 WAS IN A LITTLE BIT OF A DIFFERENT SITUATION THAT WAS</p> <p>17 ALSO PART OF THIS GROUP.</p> <p>18 AND SO THIS COURT HAS -- I'LL LEAVE IT AT THAT</p> <p>19 FOR NOW. THAT WILL BE THIS COURT'S TENTATIVE RULING</p> <p>20 REGARDING THE ANALYZATION OF THE BOTTLES.</p> <p>21 AS TO DR. LONGO'S METHODOLOGY, THE COURT WOULD</p> <p>22 ALLOW DR. LONGO TO TESTIFY AS TO THE METHODS THAT HE</p> <p>23 USED IN REGARDS TO ANALYZING SAMPLES AND HIS ANALYZATION</p> <p>24 AS TO OTHER ITEMS AS WELL. I THINK THAT'S A</p> <p>25 DETERMINATION FOR THE JURORS TO MAKE IN REGARDS TO</p> <p>26 WHETHER OR NOT THEY ACCEPT HIS OPINION OR NOT AND WHAT</p> <p>27 WEIGHT THEY GIVE HIS OPINION. SO THE COURT WOULD ALLOW</p> <p>28 DR. LONGO'S METHODOLOGY OR HIS METHODS THAT HE RELIED</p>

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<p>1 UPON IN REGARDS TO TESTING AND ANY OTHER TEST RESULTS</p> <p>2 0THAT HE MAY TESTIFY TO OTHER THAN THE SAMPLE BOTTLES OF</p> <p>3 THE BABY POWDER.</p> <p>4 THE THIRD ISSUE IS IN REGARDS TO DR. LONGO'S</p> <p>5 OPINION THAT MRS. ANDERSON WAS LIKELY EXPOSED TO</p> <p>6 ASBESTOS FROM HER USE FROM JOHNSON'S BABY POWDER. I</p> <p>7 THINK THAT THAT IS SPECULATIVE AS TO HIS OPINION AS</p> <p>8 REGARDING THE FACT THAT IT WAS THE EXPOSURE TO THE</p> <p>9 JOHNSON'S BABY POWDER IN AND OF ITSELF THAT RESULTED IN</p> <p>10 THE MESOTHELIOMA OR THAT -- LET ME BACK UP A LITTLE BIT.</p> <p>11 I THINK IT WAS PHRASED A LITTLE DIFFERENT WAY</p> <p>12 THAT MRS. ANDERSON WAS LIKELY EXPOSED TO ASBESTOS FROM</p> <p>13 HER USE FROM JOHNSON'S BABY POWDER. THAT'S WHAT DEFENSE</p> <p>14 IS ASKING TO BE EXCLUDED.</p> <p>15 MR. BAILEY: YOUR HONOR, IF I MAY. I'LL WAIT</p> <p>16 UNTIL YOU FINISH.</p> <p>17 THE COURT: JUST GIVE ME A MOMENT. MY NOTE</p> <p>18 THAT I WROTE TO MYSELF INDICATES THAT MY TENTATIVE WOULD</p> <p>19 BE TO GRANT THAT MOTION IN LIMINE AS TO THAT PART OF THE</p> <p>20 MOTION. HOWEVER, I THINK THAT THAT'S NOT FULLY CORRECT.</p> <p>21 I THINK THAT THERE'S LIKE TWO PARTS. THE BINOMIAL --</p> <p>22 BINOMIAL TABLES.</p> <p>23 MR. PANATIER: THAT'S MOOT. HE'S NOT GOING TO</p> <p>24 TESTIFY ABOUT THE BINOMIAL TABLES, YOUR HONOR.</p> <p>25 THE COURT: OKAY. SO AS TO HIS OPINION THAT</p> <p>26 SHE WAS LIKELY EXPOSED TO ASBESTOS, THE COURT WOULD</p> <p>27 ALLOW AS TO THAT PART. ONCE AGAIN, HE WOULD HAVE TO LAY</p> <p>28 A PROPER -- A PROPER FOUNDATION WOULD HAVE TO BE LAID IN</p>	<p>1 MR. BAILEY: OKAY. I UNDERSTAND.</p> <p>2 MR. PANATIER: YOUR HONOR, SO IF I CAN -- IF I</p> <p>3 CAN JUST SAY A FEW THINGS. BUT, YOU KNOW, I ACTUALLY</p> <p>4 HAVE THE WITNESS HERE, AND YOUR HONOR HAS SAID THAT YOUR</p> <p>5 TENTATIVE IS TO EXCLUDE SOME OF THIS WITNESS' TESTIMONY,</p> <p>6 AND I WOULD LIKE TO BRING THE WITNESS IN TO MAKE A</p> <p>7 RECORD ON THAT BECAUSE I THINK ONCE YOU HAVE AN</p> <p>8 APPRECIATION FOR EVERYTHING THAT HAS BEEN DONE TO ASSURE</p> <p>9 THAT THESE ARE RELIABLE SAMPLES, I THINK YOUR HONOR WILL</p> <p>10 ACTUALLY CONSIDER ALLOWING THE TESTIMONY ON ALL THE</p> <p>11 SAMPLES.</p> <p>12 THE COURT: WELL, YOU CAN BRING HIM IN, BUT I</p> <p>13 DON'T SEE HOW A FOUNDATION CAN BE LAID REGARDING THE</p> <p>14 EBAY SAMPLES. I MEAN, IT ESCAPES MY IMAGINATION AS TO</p> <p>15 HOW A FOUNDATION CAN BE LAID BECAUSE THERE'S NO WAY THAT</p> <p>16 ANYONE CAN COME IN AND TESTIFY AS TO HOW THOSE BOTTLES</p> <p>17 WERE STORED FOR ALL THOSE YEARS BEFORE THEY WERE</p> <p>18 PURCHASED FROM SOMEONE FROM -- FROM SOMEONE ON EBAY AND</p> <p>19 THE AUTHENTICITY OF THOSE BOTTLES.</p> <p>20 I READ EVERYTHING ABOUT IT. DIDN'T APPEAR</p> <p>21 THAT THERE WERE ANY PRY MARKS ON THE BOTTLES OF BABY</p> <p>22 POWDER. I ALSO READ THAT THERE ARE WAYS OF PUTTING IN</p> <p>23 NEW POWDER WITHOUT SHOWING ANY TYPE OF EFFECTS OF DOING</p> <p>24 THAT.</p> <p>25 SO YOU CAN CALL HIM AND YOU CAN ATTEMPT TO DO</p> <p>26 SO.</p> <p>27 MR. PANATIER: I'M GOING TO PROVIDE A LITTLE</p> <p>28 BIT OF LEGAL AUTHORITY TO THE COURT AND THEN I'LL CALL</p>
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<p>1 ORDER FOR HIM TO GIVE THAT OPINION. AND ONCE AGAIN, IT</p> <p>2 WOULD JUST -- IT WOULD BE AN OPINION AND THE JURORS</p> <p>3 WOULD MAKE A DETERMINATION AS TO WHAT -- WHETHER OR NOT</p> <p>4 THEY RELY ON THAT OPINION AND HOW MUCH WEIGHT THEY WOULD</p> <p>5 GIVE THAT OPINION.</p> <p>6 OKAY.</p> <p>7 MR. BAILEY: THANK YOU, YOUR HONOR. REALLY</p> <p>8 JUST BRIEFLY, I'D JUST LIKE TO FOCUS ON THAT, AND THAT</p> <p>9 IS HIS ABILITY TO SAY SOMEHOW STATISTICALLY THAT MORE</p> <p>10 LIKELY THAN NOT MRS. ANDERSON WAS EXPOSED TO ASBESTOS AS</p> <p>11 A RESULT OF HIS TESTING. BECAUSE WHAT HE'S BASING THAT</p> <p>12 OPINION ON IS THE OVERALL RESULTS OF 30-PLUS TESTS THAT</p> <p>13 YOU, BY YOUR RULING, HAVE EXCLUDED.</p> <p>14 SO IF THAT'S THE BASIS OF THAT OPINION, THEN</p> <p>15 THAT OPINION SHOULD BE STRICKEN AS WELL BECAUSE</p> <p>16 OTHERWISE WE'RE RIGHT BACK WHERE WE STARTED. IF HE</p> <p>17 WANTS TO TALK ABOUT THE TWO ANDERSON BOTTLES AND</p> <p>18 WHATEVER CONCLUSION HE DRAWS FROM THAT, THAT SEEMS FAIR</p> <p>19 FOR CROSS-EXAMINATION. BUT STATISTICALLY TO LOOK AT AND</p> <p>20 TESTIFY ABOUT THE PROBABILITY OF SOMETHING HAPPENING</p> <p>21 BASED ON 30 BOTTLES THAT YOUR HONOR HAS INDICATED HE'S</p> <p>22 NOT GOING TO BE TESTIFYING ABOUT, SORT OF UNDERMINES THE</p> <p>23 FIRST PART OF YOUR RULING.</p> <p>24 THE COURT: THAT'S WHY I INDICATED THAT BASED</p> <p>25 UPON PROPER FOUNDATION IS LAID, THE COURT WOULD LIKELY</p> <p>26 ALLOW HIM TO STILL -- TO STILL GIVE HIS OPINION. THEY</p> <p>27 MAY BE ABLE TO LAY A FOUNDATION BASED ON OTHER FACTORS,</p> <p>28 NOT JUST ON THOSE SAMPLES. I DON'T KNOW.</p>	<p>1 DR. LONGO ON THIS.</p> <p>2 SO HERE'S THE THING. THEY DON'T CITE ANY</p> <p>3 AUTHORITY ABOUT EBAY. THERE IS NO AUTHORITY ABOUT EBAY.</p> <p>4 THREE COURTS NOW HAVE HEARD THIS AND HAVE ADMITTED THE</p> <p>5 SAMPLES AND HERE'S WHY. BECAUSE THEY ARE WHAT THEY</p> <p>6 PURPORT TO BE. ONE-THIRD OF THEM ARE OFF THE SHELF. SO</p> <p>7 THAT'S WHERE WE NEED TO START IS A THIRD OF THESE ARE</p> <p>8 OFF THE SHELF.</p> <p>9 THE COURT: AND I'VE ALREADY SAID THE ONES</p> <p>10 FROM OFF THE SHELF --</p> <p>11 MR. PANATIER: I UNDERSTAND.</p> <p>12 THE COURT: -- I SAID THOSE WOULD BE ALLOWED.</p> <p>13 MR. PANATIER: THOSE ARE GOOD, I UNDERSTAND.</p> <p>14 AND SOME OF THOSE ARE ALSO FROM THE PEOPLE WHO OWNED</p> <p>15 THEM.</p> <p>16 HERE'S THE PROBLEM. THEY'VE NOW HAD THEIR OWN</p> <p>17 EXPERTS LOOK AT THE SAMPLES. THIS IS A BATTLE OF THE</p> <p>18 EXPERTS. THEIR EXPERTS, THEY'VE BEEN ASKED, "IS THERE</p> <p>19 ANY EVIDENCE OF TAMPERING? IS THERE ANY EVIDENCE THAT</p> <p>20 THESE ARE NOT WHAT THEY PURPORT TO BE?"</p> <p>21 AND NO ONE, NOT THE LAWYERS, NOT THEIR</p> <p>22 EXPERTS, HAVE SAID THAT THEY ARE ANYTHING BUT JOHNSON'S</p> <p>23 BABY POWDER. NOBODY.</p> <p>24 THE COURT: BUT THAT'S NOT THE ONLY ISSUE.</p> <p>25 MR. PANATIER: AND I'M GOING TO GET TO YOUR</p> <p>26 HONOR'S ISSUE, I BELIEVE. SO LET ME GO HERE TO THE LAW.</p> <p>27 SO THIS IS BUCKWALTER VERSUS AIRLINE TRAINING</p> <p>28 AND IT SAYS:</p>

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5 (Pages 1699 to 1702)

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<p>1 "THE STANDARD FOR RULING ON WHETHER 2 MATTERS MAY REASONABLY BE RELIED UPON." 3 AGAIN, THIS IS -- THEY'VE FRAMED IT AS AN 4 AUTHENTICITY MOTION. IT WOULD ONLY BE AN AUTHENTICITY 5 MOTION -- THAT WOULD ONLY BE PROPER IF THEY WERE TRYING 6 TO INTRODUCE THESE INTO EVIDENCE. THE QUESTION IS CAN 7 AN EXPERT REASONABLY RELY UPON THEM? AND THAT'S THE LAW 8 THAT WE'RE UNDER. 9 THEY HAVE COMPLETELY MISCHARACTERIZED THE LAW 10 BECAUSE HERE'S WHY. IN A CRIMINAL CONTEXT, CRIMINAL 11 CONTEXT. SO YOU HAVE A KNIFE THAT THE POLICE FIND IN A 12 BACKYARD. THAT COMES IN IN EVERY CASE. THE DEFENDANT 13 IS NEVER GOING TO STIPULATE THAT THAT IS AUTHENTIC, THAT 14 THAT IS HIS KNIFE. 15 THE JURY GETS TO DECIDE. THE POLICE COME IN. 16 THEY DO TESTING ON IT. THE CHAIN OF CUSTODY STARTS WHEN 17 THEY FIND THE KNIFE, JUST LIKE THE CHAIN OF CUSTODY 18 BEGINS WHEN WE FIND THE SAMPLES. 19 THE COURT: NOT NECESSARILY SO. THERE ARE 20 MOTIONS THAT IN CRIMINAL CASES -- WHICH I SAT IN 21 CRIMINAL COURT -- 22 MR. PANATIER: I UNDERSTAND THAT. 23 THE COURT: -- 14 YEARS OR SO. REGARDING 24 THOSE PARTICULAR ISSUES, 1538.5 MOTIONS AND THINGS OF 25 THAT SORT. AND IF THERE IS NOT A PROPER CHAIN OF 26 CUSTODY, THOSE ITEMS ARE EXCLUDED. SO YOUR STATEMENT IS 27 NOT CORRECT. 28 MR. PANATIER: BUT THAT CHAIN OF CUSTODY FOR</p>	<p>1 LOOK AT -- THIS IS COMMENTS TO EVIDENCE CODE 2 SECTION 1400, YOUR HONOR. THEY TRIER OF FACT 3 INDEPENDENTLY DETERMINES AUTHENTICITY WHEN IT'S A 4 CENTRAL ISSUE. 5 HERE'S WHAT DR. LONGO DID, THOUGH. THESE ARE 6 ALL THE SAMPLES THAT HE TESTED. AND WHAT HE DID, HE DID 7 SEVERAL THINGS TO VERIFY THAT THESE ARE WHAT THEY 8 PURPORT TO BE. HE ACTUALLY DID A PARTICLE SIZE 9 DISTRIBUTION -- 10 THE COURT: COUNSEL, WAIT A SECOND. HE'S BACK 11 IN THE COURTROOM. 12 MR. PANATIER: WE ASKED HIM BACK IN TO 13 TESTIFY. 14 OKAY. CAN YOU STEP OUT FOR A SECOND, BILL. 15 16 (DR. LONGO EXITS THE COURTROOM.) 17 18 MR. PANATIER: SO FOR ALL 17 POSITIVES, HE DID 19 A SIZE DISTRIBUTION, AND HE COMPARED IT TO THE OFF THE 20 SHELF AND THEY ALL MATCH. THEY'RE ALL JOHNSON'S BABY 21 POWDER, YOUR HONOR. HE DID THIS FOR EVERY SINGLE 22 POSITIVE SAMPLE. HE ANALYZED OVER 5,000 PARTICLES. FOR 23 EVERY SINGLE ONE, THEY ARE THE SAME. THEY ARE JOHNSON'S 24 BABY POWDER. 25 SO HE HAD THE CONTROL HE PULLED OFF THE SHELF, 26 AND THEN HE COMPARED THEM WITH THE POSITIVE SAMPLE. HE 27 MEASURED 5,000 PARTICLES IN EVERY SINGLE ONE, AND 28 THEY'RE ALL THE SAME.</p>
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<p>1 THE COPS STARTS WHEN THEY FIND THE KNIFE; RIGHT? THERE 2 IS A CHAIN OF CUSTODY FOR EVERY SINGLE BOTTLE HERE WHEN 3 THE BOTTLES WERE LOCATED. JUST LIKE THERE IS A CHAIN OF 4 CUSTODY FOR THE KNIFE ONCE THE KNIFE IS FOUND. 5 SO THIS IDEA OF A CHAIN OF CUSTODY THAT GOES 6 BACK TO WHEN IT WAS PURCHASED IS COMPLETELY NONEXISTENT 7 IN THE LAW. THE QUESTION IS, AND WHAT THE LAW SAYS IS, 8 IS THIS SOMETHING THAT AN EXPERT WOULD REASONABLY RELY 9 UPON? 10 LET ME GIVE YOU ANOTHER CASE. THIS IS 11 EXTREMELY IMPORTANT. PEOPLE VERSUS DOCKINS. THE BURDEN 12 OF AUTHENTICITY IS MET BY A SHOWING THAT THE EVIDENCE IS 13 A REASONABLE REPRESENTATION OF WHAT IT IS ALLEGED TO 14 PORTRAY. 15 KEEP IN MIND, IN THIS CASE THERE IS NO 16 ALLEGATION THAT IT IS NOT JOHNSON'S BABY POWDER. NONE. 17 NO EVIDENCE. THEY'VE HAD THE SAMPLES. THEY'VE HAD 18 DR. LONGO'S TESTIMONY SINCE LAST AUGUST, AND THERE IS NO 19 ALLEGATION THAT IT ISN'T WHAT IT PURPORTS TO BE. 20 AND THEN JAZIRI VERSUS MOUND. THIS IS 2009. 21 THE FACT THAT CONFLICTING INFERENCES, THEY 22 WANT TO MAKE CONFLICTING INFERENCE, CAN BE DRAWN 23 REGARDING AUTHENTICITY GOES TO ITS WEIGHT AND NOT ITS 24 ADMISSIBILITY. AND THE CASE LAW IN CALIFORNIA IS VERY 25 CLEAR THAT WHEN ONE SIDE IS ARGUING, THE CENTRAL ISSUE 26 IS WHETHER OR NOT IT IS AUTHENTIC OR NOT. THAT IS AN 27 ISSUE FOR THE JURY. THE JURY GETS TO DECIDE WHETHER OR 28 NOT THEY THINK IT IS WHAT IT PURPORTS TO BE.</p>	<p>1 SO WHEN THE LAW SAYS THE QUESTION IS WHETHER 2 OR NOT THIS WOULD BE SOMETHING THAT AN EXPERT CAN 3 REASONABLY RELY UPON, HE DID THE WORK. HE DID THE WORK. 4 HE DIDN'T JUST SAY, WELL, IT COMES IN JOHNSON & JOHNSON. 5 I'M GOING TO ASSUME THAT'S WHAT IT IS. EVEN THOUGH OF 6 COURSE THAT'S A GOOD BASIS TO DO IT, BUT HE ACTUALLY 7 TOOK WHAT'S INSIDE AND DID A PARTICLE SIZE DISTRIBUTION 8 TO MATCH THEM. AND THEY ALL MATCH. 9 THE SECOND THING IS -- 10 THE COURT: LET ME ASK YOU A QUESTION. WHEN 11 YOU SAY HE DID A PARTICLE SIZE ANALYSIS, IS THERE A 12 DIFFERENCE IN REGARDS TO PARTICLE SIZE AS TO OTHER 13 BRANDS OF BABY POWDER? 14 MR. PANATIER: YES. IN FACT, WE ATTACH TO OUR 15 RESPONSE A DOCUMENT FROM THEIR SUPPLIER THAT SAID THAT 16 THE PARTICLE SIZE DISTRIBUTIONS WILL VARY WILDLY FROM 17 MANUFACTURER TO MANUFACTURER. SO THAT'S THEIR SUPPLIER 18 SAYING THAT, AND DR. LONGO MATCHED THEM ALL FOR JOHNSON 19 & JOHNSON. 20 THEN THE NEXT THING THEY DID IS THEY ACTUALLY 21 DEMONSTRATED HOW THERE'S NO WAY -- THERE IS NO WAY TO 22 GET THESE LIDS OFF WITHOUT HURTING THE CAN. FOR THE 23 CANS -- AND THEN YOUR HONOR SAID YOU SAW THE LIDS. THIS 24 IS DR. LONGO'S WORK THAT HE DID. HE USED A 25 STEREO MICROSCOPE. HE TOOK A PICTURE OF IT BEFORE AND 26 THEN SHOWED WHAT HE HAD TO DO TO GET THIS THAT OFF. 27 THIS LID DOES NOT SCREW OFF. THERE'S NO WAY TO GET IT 28 OFF BUT TO PRY IT OFF AND DAMAGE IT.</p>

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6 (Pages 1703 to 1706)

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<p>1 SO THEY TOOK THE STEREOMICROSCOPE TO EVERY</p> <p>2 SINGLE ONE TO CHECK WHETHER OR NOT ANY OF THIS HAD</p> <p>3 HAPPENED. IT NEVER HAD. SO YOU HAVE ONE -- NO EVIDENCE</p> <p>4 OF TAMPERING. YOU HAVE NO EVIDENCE OF CONTAMINATION.</p> <p>5 YOU'VE GOT A MATCHING PARTICLE SIZE FOR EVERY SINGLE</p> <p>6 SAMPLE.</p> <p>7 THEN, YOUR HONOR, THERE'S ONLY ONE OTHER THING</p> <p>8 THAT THEY HAVE, WHICH IS THIS, THIS YOUTUBE VIDEO OF A</p> <p>9 LADY SAYING HERE'S HOW I CAN REFILL IT THROUGH THE</p> <p>10 HOLES.</p> <p>11 OKAY. THEY CAN CROSS HIM ON THAT, AND HE WILL</p> <p>12 TESTIFY THAT THE IDEA THAT THAT HAPPENED ON 35 SAMPLES</p> <p>13 IS UTTERLY LUDICROUS, THAT SOMEHOW ALL OF THESE</p> <p>14 INDEPENDENT PEOPLE AROUND THE COUNTRY, COLLECTORS, THE</p> <p>15 PEOPLE WHO SOLD THEM ON EBAY, THE PEOPLE WHO BOUGHT THEM</p> <p>16 OFF THE SHELF, THAT THEY ALL SOMEHOW DECIDED TO REFILL</p> <p>17 IT WITH SOMETHING ELSE?</p> <p>18 WE KNOW THEY DIDN'T, ONE, BECAUSE THERE'S NO</p> <p>19 EVIDENCE THEY DID. BUT TWO, BECAUSE THE CONTROLS HE</p> <p>20 BOUGHT OFF THE SHELF, THE JOHNSON & JOHNSON CONTROLS,</p> <p>21 THE PARTICLE SIZE DISTRIBUTION MATCHES EXACTLY. AND SO</p> <p>22 WE HAVE A REASONABLE -- ABSOLUTELY REASONABLE BASIS FOR</p> <p>23 HIM TO TESTIFY THAT THESE ARE WHAT THEY PURPORT TO BE.</p> <p>24 IF THEY WANT TO CROSS HIM ON PRETTY MUCH A</p> <p>25 WILD GOOSE CHASE THEORY THAT MAYBE ON ALL OF THESE</p> <p>26 SOMEONE REFILLED THEM, THEY CAN DO THAT, BUT THAT GOES</p> <p>27 TO THE WEIGHT, YOUR HONOR. I DON'T THINK THAT THEY HAVE</p> <p>28 BEEN SQUARE WITH THE COURT ABOUT WHAT DR. LONGO DID TO</p>	<p>1 MCCRONE FOUND.</p> <p>2 SO IT'S LITERALLY THERE ARE FOUR OR FIVE</p> <p>3 POINTS THAT PIN THIS TO THE GROUND AS REASONABLE AND</p> <p>4 RELIABLE INFORMATION. EVERYTHING ELSE IS CROSS BECAUSE,</p> <p>5 REMEMBER IT'S ONE THING TO SAY AUTHENTICITY. IT'S</p> <p>6 ANOTHER TO SAY WHAT IS YOUR THEORY AS TO WHY THESE ARE</p> <p>7 NOT WHAT THEY PURPORT TO BE?</p> <p>8 THE COURT: OKAY. WELL, MY INITIAL QUESTION,</p> <p>9 AND THE REASON FOR MY TENTATIVE WAS RELIABILITY ISSUES.</p> <p>10 MR. PANATIER: YES, YOUR HONOR.</p> <p>11 THE COURT: AND AUTHENTICITY ISSUES.</p> <p>12 MR. PANATIER: YES, YOUR HONOR.</p> <p>13 THE COURT: SO IT APPEARS THAT BASED UPON WHAT</p> <p>14 YOU HAVE INFORMED THE COURT, THAT THERE MAY BE A PROPER</p> <p>15 FOUNDATION LAID REGARDING WHETHER OR NOT THESE ITEMS ARE</p> <p>16 RELIABLE AND WHAT THAT OPINION IS BASED UPON AND WHETHER</p> <p>17 OR NOT THEY ARE AUTHENTIC AND WHAT THAT OPINION IS BASED</p> <p>18 ON.</p> <p>19 MR. PANATIER: YES, YOUR HONOR.</p> <p>20 THE COURT: AND SO I -- IF YOU'RE MAKING AN</p> <p>21 OFFER OF PROOF, AND OFFER TO THIS COURT THAT DR. LONGO</p> <p>22 IN A 402 WOULD TESTIFY AS TO WHAT YOU JUST INFORMED THE</p> <p>23 COURT, THIS COURT WOULD LIKELY ALLOW DR. LONGO THEN TO</p> <p>24 TESTIFY AS TO THOSE ITEMS BASED UPON THAT ADDITIONAL</p> <p>25 INFORMATION.</p> <p>26 MR. PANATIER: THANK YOU, YOUR HONOR.</p> <p>27 MR. BAILEY: QUICKLY, YOUR HONOR. JUST ON THE</p> <p>28 ARGUMENT THAT THESE TESTS PROVE THAT THESE PRODUCTS ARE</p>
Page 1704	Page 1706
<p>1 VERIFY THESE THINGS.</p> <p>2 AND THEN OF COURSE IT COMES BACK TO THE FACT</p> <p>3 THAT THEIR OWN EXPERT HAS TESTED ALL OF THEM. HE'S</p> <p>4 TESTED ALL OF THE SAME SAMPLES, AND TO DATE HE HAS ZERO</p> <p>5 EVIDENCE THAT ANY OF THESE WERE TAMPERED WITH OR</p> <p>6 CONTAMINATED OR ARE NOT WHAT THEY PURPORT TO BE.</p> <p>7 THE COURT: ALL RIGHT. BUT DR. LONGO</p> <p>8 CERTAINLY CAN'T TESTIFY TO WHAT CONDITION THEY WERE</p> <p>9 STORED IN.</p> <p>10 MR. PANATIER: NO. ALL HE'S GOT TO DO IS SAY,</p> <p>11 LOOK, BASED ON THE WORK I DID, THIS IS A REASONABLE</p> <p>12 THING TO RELY UPON AND THAT THERE WAS NO EVIDENCE THAT</p> <p>13 THERE WAS ANYTHING ELSE INSIDE. AND SO HE'S DONE THAT.</p> <p>14 AND LET'S ALSO TAKE ANOTHER STEP. FOR THE</p> <p>15 RESULTS, FOR THE POSITIVE CONTAINERS, YOUR HONOR, THEY</p> <p>16 MATCH -- WHAT JOHNSON & JOHNSON WAS FINDING FOR YEARS</p> <p>17 AND YEARS AND YEARS.</p> <p>18 THE COURT: I DIDN'T GET THAT POINT.</p> <p>19 MR. PANATIER: MY POINT IS HIS RESULTS ARE</p> <p>20 CONSISTENT WITH WHAT JOHNSON & JOHNSON FOUND INTERNALLY,</p> <p>21 AND HE'S REVIEWED ALL OF THOSE DOCUMENTS. HE'S REVIEWED</p> <p>22 EVERY ONE OF THESE DOCUMENTS. AND THE REASON HE</p> <p>23 REVIEWED THEM WAS TO SAY IS WHAT I'M FINDING, WHAT</p> <p>24 JOHNSON & JOHNSON ALREADY KNEW. AM I FINDING WHAT THEY</p> <p>25 WERE FINDING? AND THE ANSWER IS YES.</p> <p>26 HE FOUND WHAT DR. BLOUNT FOUND. HE FOLLOWED</p> <p>27 HER METHODOLOGY. HE FOUND WHAT DR. BLOUNT FOUND. HE</p> <p>28 FOUND WHAT JOHNSON & JOHNSON FOUND. HE FOUND WHAT</p>	<p>1 ALL THE SAME, ALL YOU HAVE TO DO IS KNOW WHAT HIS</p> <p>2 CONCLUSIONS ARE AS A RESULT OF HIS OWN TEST WORK.</p> <p>3 IN MRS. ANDERSON'S CASE, HE LOOKED AT TWO</p> <p>4 BOTTLES. ONE HE FOUND NOTHING IN AND ANOTHER HE FOUND</p> <p>5 ONE FIBER IN WHICH HE EXTRAPOLATES OUT TO BE 7,000</p> <p>6 FIBERS PER GRAM.</p> <p>7 NOW, IN THE PRODUCT THAT HE TESTED IN ORDER TO</p> <p>8 COME UP WITH THE NUMBERS HE WANTS TO BRING TO THIS</p> <p>9 COURTROOM FROM A PRE-1953 PRODUCT WITH NO CHAIN OF</p> <p>10 CUSTODY JUST TO ANSWER THE QUESTION ARE THESE ALL THE</p> <p>11 SAME. HE SAYS THERE'S 15 MILLION ASBESTOS FIBERS IN A</p> <p>12 GRAM OF THAT PRODUCT, AND EITHER ZERO OR ONE IN A GRAM</p> <p>13 OF A PRODUCT HE TESTED NOW.</p> <p>14 NOW, THOSE DON'T LINE UP AT ALL. I DON'T CARE</p> <p>15 WHAT KIND OF CHART YOU MAKE AS TO HOW THEY'RE</p> <p>16 DISTRIBUTED. WE'RE TALKING ABOUT TWO PRODUCTS, ONE OF</p> <p>17 WHICH WE DON'T KNOW WHERE IT'S BEEN IN 70 YEARS, WHICH</p> <p>18 HAS THEY SAY 15 MILLION FIBERS PER GRAM AND ANOTHER ONE</p> <p>19 WHICH HAS ZERO OR ONE.</p> <p>20 NOW, THAT ON ITS FACE TELLS YOU WE'RE NOT</p> <p>21 LOOKING AT THE SAME PRODUCT, AND THEY RANGE VASTLY</p> <p>22 ACROSS THE SPECTRUM, AND SO IF THERE'S A FINGERPRINT</p> <p>23 YOU'RE SUPPOSED TO SAY I CAN TELL BY LOOKING AT THIS</p> <p>24 WHETHER OR NOT THEY'RE IDENTICAL, THERE'S YOUR ANSWER.</p> <p>25 2,000 TIMES GREATER IN THE FIRST ONE HE WANTS TO USE AND</p> <p>26 IN THE ONE MRS. ANDERSON ACTUALLY USED. HE TESTED HERS,</p> <p>27 AND I HAVE NO OBJECTION TO HIM USING THOSE.</p> <p>28 THE COURT: WELL, I STILL HAVE A QUESTION FOR</p>

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7 (Pages 1707 to 1710)

Page 1707	Page 1709
<p>1 BOTH SIDES IN REGARDS TO THOSE, THE ONES THAT I CALLED 2 HISTORICAL SAMPLES AS TO THE RELEVANCE OF THOSE SAMPLES, 3 THE ONES THAT PREDATE THE TIME PERIOD THAT'S AT ISSUE IN 4 THIS CASE. 5 MR. PANATIER: SURE. I CAN ADDRESS THAT. SO 6 THE EVIDENCE WILL BE THAT -- REMEMBER FOR MOST OF THOSE 7 ARE ITALIAN, AND WE HAVE A WINDOW OF ITALIAN IN THIS 8 CASE OF 1980. AND SO THAT'S WHAT IS RELEVANT TO IS THAT 9 THEY ALL COME FROM THE SAME PLACE. 10 IT'S SORT OF LIKE DR. COMPTON. DR. COMPTON 11 HAD TESTED ITALIAN AND VERMONT EVEN THOUGH ITALIAN IS 12 ONLY 1980, AND WHAT DR. COMPTON TESTIFIED TO WAS THAT 13 TALC IS REPRESENTATIVE OF CURRENT AND PAST TALC 14 HORIZONS, MEANING IT'S CONSISTENT THROUGHOUT. 15 IN FACT, DR. SANCHEZ, WHO'S GOING TO TESTIFY 16 TOMORROW, SAYS IT'S ALL THE SAME. SAYS THE ORE IS ALL 17 THE SAME. 18 SO I BELIEVE THAT'S A FOUNDATIONAL ISSUE AND I 19 WILL LAY THAT FOUNDATION, YOUR HONOR, OR IT'S A CROSS 20 ISSUE. AND OF COURSE I'M GOING TO BE THE FIRST ONE TO 21 POINT OUT WITH DR. LONGO THAT, HEY, A LOT OF THESE 22 PREDATE HER ACTUAL EXPOSURE. WHY ARE THEY RELEVANT TO 23 HER? AND HE'S GOING TO SAY, WELL, FOR A BRIEF PERIOD IN 24 1980 THEY USED ITALIAN. PRIMARILY WHAT WE'RE GOING TO 25 BE FOCUSED ON IS VERMONT. 26 AND I SHOWED MR. BAILEY MY POWERPOINT. I AM 27 PRIMARILY FOCUSED ON VERMONT, BUT WE'RE GOING TO LAY A 28 FOUNDATION FOR ALL OF THIS.</p>	<p>1 JURY. ONCE AGAIN, THERE'S STILL A QUESTION AS TO HOW 2 THE JURORS WILL VALUE IT, WHETHER THEY'LL DISREGARD IT 3 IN TOTAL OR NOT. GIVE IT WHATEVER -- WHATEVER WEIGHT 4 THEY THINK IT DESERVES. 5 MR. BAILEY: I UNDERSTAND, JUDGE. BUT AS THE 6 GATEKEEPER ON CUSTODY ISSUES, YOU ARE WELL AWARE OF THE 7 RISK OF THROWING IT TO THEM TO LET THEM FIGURE OUT 8 WHETHER OR NOT THIS MEETS THE CHAIN OF CUSTODY IS JUST 9 YOUR ROLE AND NOT THEIRS, I THINK, RESPECTFULLY. 10 MR. PANATIER: AND ON THAT LAST THING, YOUR 11 HONOR, I'LL JUST SAY THIS IS A FAILURE OF COUNSEL TO 12 APPRECIATE WHERE THE DIFFERENT THINGS CAME FROM. 13 THE 1953 SAMPLE THAT HAD 15 MILLION WAS 14 ITALIAN. JOANNE ANDERSON'S IS CHINESE. SO OF COURSE 15 THERE'S GOING TO BE A DIFFERENCE, AND DR. LONGO IS GOING 16 TO LAY THAT FOUNDATION. 17 THEY'RE DIFFERENT SOURCES, SO OF COURSE 18 THERE'S DIFFERENT AMOUNTS. AND ALL OF THAT FOUNDATION 19 WILL BE LAID, YOUR HONOR. I'M GOING TO LAY MORE 20 FOUNDATION FOR DR. LONGO THAN I'VE EVER LAID. 21 THE COURT: I STILL HAVE A QUESTION REGARDING 22 WHETHER OR NOT THE COURT WILL ALLOW ANY TESTIMONY 23 REGARDING THE VINTAGE, THE HISTORICAL BABY POWDER TEST. 24 I'VE HEARD EVERYTHING YOU SAID ABOUT THAT. I'M STILL 25 TRYING TO DETERMINE IN MY MIND WHETHER OR NOT I WILL LET 26 THAT IN. 27 MR. PANATIER: YOUR HONOR, TO BE CLEAR, ARE 28 YOU TALKING ABOUT THE "PRE HER EXPOSURE" DATES?</p>
Page 1708	Page 1710
<p>1 MR. BAILEY: YOUR HONOR, AGAIN, I'M NOT GOING 2 TO BEAT A DEAD HORSE, BUT THE PROOF IS IN THE FINDINGS 3 THAT HE'S BRINGING. HE'S BRINGING A PRODUCT THAT 4 DIFFERS BETWEEN 15 MILLION FIBERS PER GRAM AND 7, WHICH 5 IS REALLY ONLY 1 TIMES WHATEVER MATH HE WANTS TO DO. 6 THAT ON ITSELF SHOWS YOU HOW UNRELIABLE THESE TESTS ARE, 7 AND THEY'RE OF PRODUCTS THAT WE DON'T EVEN KNOW WHERE 8 THEY CAME FROM OR WHERE THEY'VE BEEN. 9 YOU'VE HEARD ALREADY THE POSSIBILITY OF 10 CONTAMINATION AS A RESULT OF JUST DAY IN AND DAY OUT OF 11 EXPOSURES TO ASBESTOS IN THE AIR. MRS. ANDERSON HAD ONE 12 FIBER THAT HE FOUND IN ONE BOTTLE, AND THE OTHER ONE HE 13 FOUND ZERO. SO WE SHOULDN'T FIND OURSELVES COMPARING 14 PROBABILITIES TO A PRE-1950 OR '40 BOTTLE WITH WHAT THEY 15 SAY IS 15 MILLION FIBERS IN IT. THAT'S THE BEST PROOF 16 THAT THERE ARE AUTHENTICATION ISSUES. 17 THE COURT: WELL, AND I THINK THAT'S SOMETHING 18 THAT DEFENSE THEN WOULD CERTAINLY ARGUE AND POINT OUT, 19 AND I THINK IT'S A VALID ARGUMENT. I CERTAINLY DO. AND 20 WHAT -- WHAT IMPACT THIS TESTIMONY HAS ON THE JURY, I 21 GUESS ONLY TIME WILL TELL. BUT I CERTAINLY SEE SOME 22 ISSUES IN REGARDS TO SOME OF THE THINGS THAT YOU'VE 23 RAISED, BUT MY PROBLEM INITIALLY WAS RELIABILITY AND 24 AUTHENTICITY. AND BASED UPON WHAT MR. PANATIER HAS 25 INFORMED THIS COURT, IT LOOKS LIKE THERE WERE A NUMBER 26 OF TESTS THAT WERE DONE TO FIRM UP THE RELIABILITY ISSUE 27 AND THE AUTHENTICITY ISSUE. 28 NOW, THAT'S JUST TO PUT THE ISSUE BEFORE THE</p>	<p>1 THE COURT: CORRECT. 2 MR. PANATIER: YOUR HONOR, LET ME TALK WITH 3 COUNSEL FOR A MINUTE AND SEE IF I CAN HASH SOMETHING 4 OUT. 5 THE COURT: OKAY. 6 7 (A DISCUSSION WAS HELD OFF THE RECORD.) 8 9 MR. BAILEY: YOUR HONOR, MR. PANATIER HAS 10 OFFERED WHAT I THINK IS WHAT WE DO. YOUR HONOR, IF IT 11 BECOMES MORE COMPLICATED, WE WILL ABIDE BY YOUR RULE. 12 THE COURT: ALL RIGHT. I THINK WHAT I'LL DO 13 IS BEFORE DR. LONGO GETS TO THE POINT IN THE TRIAL WHERE 14 HE WOULD TESTIFY AS TO THE RESULTS SPECIFICALLY 15 REGARDING WHAT I CALL THE HISTORICAL OR THE VINTAGE BABY 16 POWDER, COUNSEL CAN APPROACH SIDEBAR, AND REGARDING 17 WHETHER OR NOT I BELIEVE THE PROPER FOUNDATION WAS LAID 18 AND WHETHER I THINK IT MEETS ALL OF THE CRITERIA THAT IT 19 NEEDS TO MEET. 20 MR. PANATIER: SO I DO HAVE A STOPPING POINT 21 BEFORE I GET TO THE RESULTS AND THEN WE CAN APPROACH 22 SIDEBAR. 23 THE COURT: OKAY. 24 MR. PANATIER: ALL RIGHT. 25 THE COURT: ALL RIGHT. AND JUST FOR YOUR 26 FURTHER INFORMATION, THERE WAS A REQUEST BY DEFENSE FOR 27 A 402 IN THE ALTERNATIVE. 28 MR. BAILEY: WE'LL WAIVE THAT, YOUR HONOR.</p>

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8 (Pages 1711 to 1714)

Page 1711	Page 1713
<p>1 WE'LL STAND ON THE ARGUMENT AND PLEADINGS.</p> <p>2 THE COURT: OKAY.</p> <p>3 MR. PANATIER: CAN WE BRING DR. LONGO IN?</p> <p>4 THE COURT: YES. AND WE'RE GOING TO BRING IN</p> <p>5 THE JURORS.</p> <p>6</p> <p>7 (THE JURY ENTERED THE COURTROOM.)</p> <p>8 (THE FOLLOWING PROCEEDINGS WERE HELD IN</p> <p>9 OPEN COURT IN THE PRESENCE OF THE JURY:)</p> <p>10</p> <p>11 THE COURT: EVERYONE MAY BE SEATED. ON THE</p> <p>12 RECORD IN THE JOANNE ANDERSON AND GARY ANDERSON VERSUS</p> <p>13 JOHNSON & JOHNSON AND JOHNSON & JOHNSON INCORPORATED.</p> <p>14 FOR THE RECORD, THE JURORS AND ALTERNATE</p> <p>15 JURORS ARE PRESENT. THIS IS CASE NUMBER BC666513. WE</p> <p>16 HAVE PLAINTIFF COUNSEL PRESENT, MR. NIDOFFER AND</p> <p>17 MR. PANATIER AND MR. GREENSTONE. WE HAVE DEFENSE</p> <p>18 COUNSEL PRESENT, MR. CALFO, MR. BAILEY, MS. STEINMANN.</p> <p>19 AND WE ARE READY TO PROCEED.</p> <p>20 AND YESTERDAY WE ENDED WITH SOME VIDEO</p> <p>21 TESTIMONY. THAT VIDEO TESTIMONY HAS NOT BEEN COMPLETED,</p> <p>22 BUT WE'RE GOING TO INTERRUPT THAT VIDEO TESTIMONY AT</p> <p>23 THIS POINT TO CALL A WITNESS DR. LONGO. PLAINTIFF IS</p> <p>24 CALLING THIS WITNESS. SO THIS IS PART OF PLAINTIFFS'</p> <p>25 CASE.</p> <p>26 AS YOU RECALL, LAST WEEK I INDICATED AND</p> <p>27 COUNSEL INDICATED THAT THEY WERE RESTING SUBJECT TO</p> <p>28 CALLING DR. LONGO. SO BECAUSE OF SCHEDULING ISSUES,</p>	<p>1 MR. PANATIER: I THINK YOU HAVE TO SPELL YOUR</p> <p>2 FIRST NAME TOO.</p> <p>3 THE WITNESS: I'M SORRY. W-I-L-L-I-A-M.</p> <p>4 THE COURT: THANK YOU. YOU MAY PROCEED.</p> <p>5</p> <p>6 WILLIAM EDWARD LONGO,</p> <p>7 CALLED BY THE PLAINTIFFS, HAVING BEEN FIRST DULY SWORN, WAS</p> <p>8 EXAMINED AND TESTIFIED AS FOLLOWS:</p> <p>9</p> <p>10 DIRECT EXAMINATION</p> <p>11 BY MR. PANATIER:</p> <p>12 Q SO I HAVE YOUR NAME UP THERE, DR. WILLIAM</p> <p>13 LONGO. WHAT TYPE OF DOCTOR ARE YOU?</p> <p>14 A I HAVE A DOCTORATE OR PH.D. IN MATERIAL</p> <p>15 SCIENCE AND ENGINEERING.</p> <p>16 Q OKAY. TELL US A LITTLE BIT ABOUT WHAT</p> <p>17 MATERIAL SCIENCE IS.</p> <p>18 A QUITE SIMPLY, IT'S THE STUDY OF MATERIALS.</p> <p>19 BUT THESE MATERIALS THAT WE STUDY CAN BE BROKEN DOWN</p> <p>20 INTO FIVE GROUPS: METALS, METALLURGY, POLYMERS OR</p> <p>21 PLASTICS, MINERALS OR CERAMICS, COMPOSITES WHERE WE</p> <p>22 MIGHT TAKE TWO OF THESE TYPES OF MATERIALS AND MIX THEM</p> <p>23 TOGETHER, AND THEN BIOMATERIALS. THESE WOULD BE THINGS</p> <p>24 THAT WE IMPLANT INTO THE HUMAN BODY SUCH AS A HIP</p> <p>25 REPLACEMENT OR A KNEE REPLACEMENT, OR IF YOU GET</p> <p>26 CATARACTS, YOU MIGHT HAVE AN INTRAOCULAR LENS WHICH IS</p> <p>27 AN ARTIFICIAL LENS WHICH THEY SWAP OUT FOR, AND THAT'S</p> <p>28 THE AREA THAT I MOSTLY STUDIED WHEN I WAS IN GRADUATE</p>
Page 1712	Page 1714
<p>1 THEY WERE NOT ABLE TO CALL DR. LONGO AS THEY WERE</p> <p>2 CALLING ALL OF THEIR OTHER WITNESSES, SO WE ALLOWED THEM</p> <p>3 TO REST, HOWEVER, GIVING THEM AN OPPORTUNITY TO CALL</p> <p>4 DR. LONGO AS ONE OF THEIR WITNESSES, AND SO NOW WE'RE</p> <p>5 INTERRUPTING THE DEFENSE CASE.</p> <p>6 SO THIS IS A PLAINTIFF WITNESS BEING CALLED BY</p> <p>7 PLAINTIFF, AND THIS -- AND THEN WE'LL PROCEED WITH THE</p> <p>8 DEFENSE CASE AFTER THAT. WE'LL CONTINUE WITH THE</p> <p>9 DEFENSE CASE.</p> <p>10 ALL RIGHT. AND, MR. PANATIER, YOU MAY</p> <p>11 PROCEED.</p> <p>12 MR. PANATIER: THANK YOU, YOUR HONOR. GOOD</p> <p>13 MORNING, EVERYBODY. AT THIS TIME PLAINTIFF CALLS</p> <p>14 DR. WILLIAM LONGO.</p> <p>15 THE COURT: AND, DR. LONGO, IF YOU WOULD COME</p> <p>16 FORWARD AND STAND BY THE WITNESS STAND. AND YOU CAN</p> <p>17 STOP RIGHT THERE. RAISE YOUR RIGHT HAND TO BE SWORN.</p> <p>18 THE CLERK: DO YOU SOLEMNLY SWEAR THE</p> <p>19 TESTIMONY YOU MAY GIVE IN THE CAUSE NOW PENDING BEFORE</p> <p>20 THIS COURT SHALL BE THE TRUTH, THE WHOLE TRUTH, AND</p> <p>21 NOTHING BUT THE TRUTH, SO HELP YOU GOD?</p> <p>22 THE WITNESS: YES, I DO.</p> <p>23 THE CLERK: THANK YOU. YOU MAY BE SEATED.</p> <p>24 THE WITNESS: THANK YOU.</p> <p>25 THE CLERK: PLEASE STATE AND SPELL YOUR FULL</p> <p>26 NAME FOR THE RECORD, PLEASE.</p> <p>27 THE WITNESS: WILLIAM EDWARD LONGO.</p> <p>28 L-O-N-G-O.</p>	<p>1 SCHOOL.</p> <p>2 MR. PANATIER: OKAY. LET ME GO AHEAD. WE'VE</p> <p>3 PREMARKED YOUR RESUME AS PLAINTIFFS' 860.</p> <p>4</p> <p>5 (PLAINTIFFS' EXHIBIT 860 MARKED FOR</p> <p>6 IDENTIFICATION.)</p> <p>7</p> <p>8 BY MR. PANATIER:</p> <p>9 Q SO LET'S JUST BRIEFLY TAKE A LOOK AT YOUR</p> <p>10 RESUME. THERE IT IS.</p> <p>11 ALL RIGHT. IT SAYS THAT YOU WORK AT A PLACE</p> <p>12 CALLED MAS, LLC. CAN YOU TELL US WHAT THAT IS?</p> <p>13 A THAT'S SHORT FOR MATERIALS ANALYTICAL</p> <p>14 SERVICES, BUT EVERYBODY CALLS IT MAS. IT'S A</p> <p>15 LABORATORY, CONSULTING, ENGINEERING, FORENSIC</p> <p>16 ENGINEERING LABORATORY. SO WE BOTH ANALYZE SAMPLES THAT</p> <p>17 COME IN FROM ALL OVER THE WORLD, ASBESTOS SAMPLES,</p> <p>18 INDUSTRIAL HYGIENE SAMPLES, MATERIAL SAMPLES.</p> <p>19 WE ALSO DO CONSULTING FOR WHEN SOMETHING GOES</p> <p>20 WRONG AND THEY ASK OUR SCIENTISTS TO TRY TO HELP THEM TO</p> <p>21 DETERMINE WHAT WENT WRONG.</p> <p>22 WE DO VOC, VOLATILE ORGANIC COMPOUND, TESTING</p> <p>23 FOR A BUNCH OF AREAS THAT ARE INTO THIS NEW GREEN</p> <p>24 LABELING. THAT NICE NEW CAR SMELL THAT WE ALL LIKE.</p> <p>25 IT'S ACTUALLY VOLATILE ORGANIC COMPOUNDS BEING EMITTED</p> <p>26 FROM THE PLASTICS AND THE ADHESIVES. EVEN THOUGH IT</p> <p>27 SMELLS NICE, IT'S NOT THAT GOOD FOR YOU. SO WE DO A</p> <p>28 WIDE RANGE OF THINGS.</p>

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9 (Pages 1715 to 1718)

<p style="text-align: right;">Page 1715</p> <p>1 Q SO I'M GOING TO SWITCH BACK TO THIS POWERPOINT 2 THAT I MADE TO HELP US GET THROUGH THIS. SO I WANT TO 3 ASK YOU ABOUT A FEW THINGS. 4 FIRST OF ALL, YOUR EDUCATION, DID YOU GO TO 5 COLLEGE? 6 A I DID. 7 Q WHAT WAS YOUR DEGREE IN? 8 A I GOT A BACHELOR'S OF SCIENCE IN MICROBIOLOGY, 9 MASTERS OF SCIENCE AND ENGINEERING, AND EVENTUALLY A 10 PH.D. OR DOCTORATE IN MATERIAL SCIENCE AND ENGINEERING. 11 Q AND WHERE WERE THOSE FROM? 12 A ALL FROM THE UNIVERSITY OF FLORIDA. 13 Q WHERE DO YOU CURRENTLY LIVE, BY THE WAY? 14 A I LIVE IN CUMMINGS, GEORGIA, WHICH IS ONE OF 15 THE MANY SUBURBS OF ATLANTA. 16 Q LET'S TALK A LITTLE BIT ABOUT THIS. EPA 17 PEER-REVIEW GROUP FOR ASBESTOS ENGINEERING PROGRAM. 18 WHAT IS THAT? 19 A FOR A WHILE THE ENVIRONMENTAL PROTECTION 20 AGENCY INVITED FOUR SCIENTISTS, THREE FROM THIS COUNTRY 21 AND ONE FROM CANADA, TO COME INTO THEIR HEADQUARTERS IN 22 CINCINNATI TO LOOK OVER THEIR RESEARCH IN ASBESTOS 23 ISSUES. SO WE WOULD LOOK AT WHAT THEY'RE DOING. THEY 24 WOULD CONTRACT OUT TO OTHER LABORATORIES FOR TESTING. 25 WE WOULD LOOK OVER THAT TESTING. THEN WE WOULD MAKE 26 SUGGESTIONS ON WHERE THEY SHOULD FOCUS THEIR ENERGY AND 27 RESEARCH IN ASBESTOS ISSUES. AND I DID THAT FOR SEVEN, 28 EIGHT YEARS.</p>	<p style="text-align: right;">Page 1717</p> <p>1 A YES. 2 Q ALL RIGHT. IT ALSO SAYS ASTM UP THERE. WE 3 HEARD DR. COMPTON. HE TOLD US A LITTLE BIT ABOUT ASTM. 4 WHAT IS YOUR INVOLVEMENT WITH ASTM? 5 A I'M A MEMBER OF THEIR D2205 COMMITTEE, WHICH 6 SPECIFICALLY IS IN CHARGE OF DEVELOPING PROTOCOLS OR 7 RECIPES FOR MEASURING ASBESTOS IN ALL TYPES OF THINGS. 8 MY INVOLVEMENT WAS THAT I WROTE ONE OF THEIR 9 METHODS, AND YOU WRITE IT, BUT THEN YOU PUT IT THROUGH 10 THE COMMITTEE, AND PEOPLE EITHER SAY YES, THIS IS GOOD, 11 OR TAKE SHOTS AT IT AND HOW TO IMPROVE IT. THAT WAS A 12 PARTICULAR CONTENTIOUS ONE. I THINK IT TOOK ME -- TOOK 13 THE COMMITTEE SIX YEARS FROM START TO FINISH TO GET THAT 14 OUT. 15 Q WERE THERE PEOPLE WHO WERE AGAINST THE METHODS 16 THAT YOU WERE PROPOSING? 17 A WELL, THERE WAS PEOPLE WHO WERE AGAINST THE 18 METHOD THAT THE COMMITTEE PROPOSED, AND THEN THERE WAS A 19 WIDE RANGE OF PEOPLE THAT WERE FOR IT. 20 Q OKAY. SO IS THAT -- UNDER STANDARDS 21 AUTHORSHIP, IT SAYS "ASTM SETTLED DUST FIBER COUNT 22 METHOD D5755." IS THAT THE METHOD YOU'RE TALKING ABOUT? 23 A YES. 24 Q AND SO IT GETS VOTED IN, IS THAT WHAT HAPPENS? 25 A WELL, IN THE COMMITTEE THERE'S 125 MEMBERS. 26 THE WORKING COMMITTEE USUALLY HAS 25 TO 30. SO EVERY 27 SIX MONTHS WE HAVE A MEETING AND YOU SEND OUT THE -- YOU 28 SEND OUT THE DRAFT. EVERYBODY LOOKS AT IT. AND THEY</p>
<p style="text-align: right;">Page 1716</p> <p>1 Q AND THEN THERE'S ANOTHER ORGANIZATION THERE, 2 THE AIHA, AND I PUT THE LOGO OVER THERE. WHAT IS THAT? 3 A THAT'S THE AMERICAN INDUSTRIAL HYGIENE 4 ASSOCIATION. THAT'S A GROUP OF -- THEIR MEMBERSHIP 5 INVOLVES GROUPS OF BOTH INDUSTRIAL HYGIENISTS, CERTIFIED 6 INDUSTRIAL HYGIENISTS OR ANY INDIVIDUALS THAT ARE 7 INTERESTED IN HOW TO MEASURE AND MAKE WORKPLACES SAFE. 8 Q OKAY. IS SOMETHING THAT THEY DO TO EVALUATE 9 WHETHER OR NOT PEOPLE ARE BEING EXPOSED TO CERTAIN 10 THINGS? 11 A YES. A WHOLE RANGE OF THINGS. YOU COULD 12 EVALUATE IF THEY'RE BEING EXPOSED TO, SAY, TOXIC 13 PARTICULATES OR ORGANIC FUMES OR RADIATION OR THE 14 LIGHTING IS NOT RIGHT OR SOUND OR -- IT'S JUST A MYRIAD. 15 IF YOU'RE IN A FACTORY AND YOU'RE DOING A TYPE OF MOTION 16 THAT'S CAUSING ELBOW PROBLEMS, THEY TRY TO WORK AND FIX 17 AND MAKE MANUFACTURING FACILITIES SAFER. 18 Q OKAY. AND HAVE YOU ACTUALLY ASSESSED 19 INDIVIDUALS' POTENTIAL EXPOSURE TO ASBESTOS IN AN 20 INDUSTRIAL HYGIENE SETTING? 21 A YES. 22 Q OKAY. HOW MANY TIMES HAVE YOU DONE THAT? 23 A ME PERSONALLY, A NUMBER OF TIMES, AND THEN WE 24 HAVE INDUSTRIAL HYGIENISTS AS WELL AS CERTIFIED 25 INDUSTRIAL HYGIENISTS THAT WORK FOR MAS, AND THEY'VE 26 DONE THAT A NUMBER OF TIMES. 27 Q HAVE YOU PUBLISHED ON THE POTENTIAL FOR 28 EXPOSURE FROM ASBESTOS-CONTAINING PRODUCTS?</p>	<p style="text-align: right;">Page 1718</p> <p>1 EITHER GO YES, NOT GOING TO VOTE, OR NO. AND IF THEY 2 SAY NO, THEN THEY WRITE THE REASONS, AND ONE NOTE CAN 3 KICK IT BACK TO THE COMMITTEE. 4 Q OKAY. YOURS ULTIMATELY WAS ADOPTED; IS THAT 5 FAIR? 6 A YES. AFTER SIX YEARS. 7 Q WELL, WHO WAS -- WHO WAS PUSHING AGAINST IT? 8 MR. BAILEY: OBJECTION, YOUR HONOR. CALLS FOR 9 HEARSAY AND IT'S NOT RELEVANT. 10 THE COURT: SUSTAINED. 11 BY MR. PANATIER: 12 Q WHO'S R. J. LEE? 13 A RICH LEE IS THE PRESIDENT OF THE R. J. LEE 14 GROUP. 15 Q OKAY. AND WHO'S MATTHEW SANCHEZ? 16 A HE IS A MINERALOGIST THAT WORKS FOR R. J. LEE. 17 Q WE'LL TALK A LITTLE BIT ABOUT R. J. LEE LATER. 18 LET'S GO BACK UP TO CONSULTED FOR THE CDC, THE 19 CENTERS FOR DISEASE CONTROL. HAVE YOU CONSULTED FOR 20 THEM? 21 A YES. 22 Q NATIONAL INSTITUTES OF HEALTH? 23 A YES. 24 Q CITY OF NEW YORK? 25 A YES, WE HAVE. 26 Q NASA? 27 A WE HAVE. 28 Q ANYTHING YOU CAN TALK ABOUT?</p>

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10 (Pages 1719 to 1722)

Page 1719	Page 1721
<p>1 A WELL, YES. FOR NASA WE WERE ASKED TO -- THEY</p> <p>2 WERE LAUNCHING AN X-RAY TELESCOPE, AND THEY HAD A</p> <p>3 PARTICULAR TYPE OF SEMICONDUCTOR BOARD THAT THEY NEEDED</p> <p>4 10 MICROMETER HOLES DRILLED IN IN CERTAIN SEQUENCE.</p> <p>5 Q 10 MICROMETERS. MICRONS?</p> <p>6 A YES.</p> <p>7 Q OKAY.</p> <p>8 A AND WE HAD WHAT'S CALLED A FOCUS ION BEAM</p> <p>9 INSTRUMENT UP IN OUR RALEIGH LABORATORY THAT USES VERY</p> <p>10 HEAVY IONS, AND YOU CAN ACTUALLY DRILL THROUGH THINGS,</p> <p>11 AND YOU CAN ACTUALLY MAKE JUMPERS ON SEMICONDUCTOR</p> <p>12 BOARDS. SAY YOU HAVE A BAD SECTION OF A BOARD AND YOU</p> <p>13 WANT TO WIRE AROUND IT. WELL, EITHER YOU GET SOMEBODY</p> <p>14 REALLY, REALLY SMALL ON THE MICROSCOPIC LEVEL OR YOU</p> <p>15 COME TO US AT THAT TIME AND WE COULD CUT OUT WHERE THE</p> <p>16 BAD CIRCUIT WAS AND THEN WE COULD LAY PLATINUM WIRE JUST</p> <p>17 LIKE YOU'RE MAKING A JUMPER. WE WERE ONE OF THE FEW</p> <p>18 THAT COULD DO THAT BACK IN THE 1990S.</p> <p>19 Q OKAY. YOU'VE ALSO WORKED FOR DOW?</p> <p>20 A YES.</p> <p>21 Q AND THE AIR FORCE?</p> <p>22 A YES. THE AIR FORCE ONE I CAN'T TALK ABOUT.</p> <p>23 Q OKAY. I WON'T ASK YOU ABOUT THAT ONE THEN.</p> <p>24 SO YOU'RE TESTIFYING TODAY. I'VE ASKED YOU TO</p> <p>25 COME TESTIFY IN COURT. YOU UNDERSTAND I REPRESENT THE</p> <p>26 PLAINTIFFS IN THIS CASE; FAIR?</p> <p>27 A YES, SIR.</p> <p>28 Q YOU HAVE TESTIFIED IN COURTS BEFORE; RIGHT?</p>	<p>1 Q AND I'M JUST GOING TO ASK YOU: DID YOU DO</p> <p>2 SOME TESTING OF JOHNSON'S BABY POWDER IN PREPARATION FOR</p> <p>3 THIS AND OTHER CASES?</p> <p>4 A YES, SIR.</p> <p>5 Q OKAY. AND WAS YOUR LAB CERTIFIED WHEN YOU DID</p> <p>6 IT?</p> <p>7 A IT WAS.</p> <p>8 Q IT SAYS "CERTIFIED BY THE AIHA." IS THAT THE</p> <p>9 SAME AIHA AS WE TALKED ABOUT EARLIER?</p> <p>10 A YES. THE AMERICAN INDUSTRIAL HYGIENE</p> <p>11 ASSOCIATION. WE ARE CERTIFIED BY THEM TO DO ASBESTOS</p> <p>12 ANALYSIS BY OPTICAL MICROSCOPY, BY TRANSMISSION ELECTRON</p> <p>13 MICROSCOPY, BY POLARIZED LIGHT MICROSCOPY. ALL TYPES OF</p> <p>14 ORGANICS AND METALS DOWN TO PARTS PER BILLION AND MOLD</p> <p>15 SPORES.</p> <p>16 Q MOLD SPORES?</p> <p>17 A MOLD SPORE SAMPLES WHERE IF YOU THINK YOU HAVE</p> <p>18 A MOLD CONTAMINATION, THEY'LL TAKE AN AIR SAMPLE AND WE</p> <p>19 CAN TELL YOU WHICH MOLD IT IS, WHICH SPORES, HOW MANY,</p> <p>20 AND WHAT YOU NEED TO DO.</p> <p>21 Q HAVE YOU ANALYZED SAMPLES OF THE MATERIAL AS</p> <p>22 WELL AS SAMPLES OF PARTICULATE AND THINGS THAT HAVE COME</p> <p>23 OUT OF AIR SAMPLES?</p> <p>24 A YES.</p> <p>25 Q IT ALSO SAYS NVLAP OR NVLAP. WHAT</p> <p>26 CERTIFICATION IS THAT?</p> <p>27 A THAT'S THE NATIONAL VOLUNTEER LABORATORY</p> <p>28 ACCREDITATION PROGRAM. THAT'S RUN ESSENTIALLY BY THE</p>
Page 1720	Page 1722
<p>1 A YES, SIR, I HAVE.</p> <p>2 Q MANY TIMES?</p> <p>3 A YES.</p> <p>4 Q HAVE YOU ALSO WORKED FOR OR TESTIFIED FOR</p> <p>5 DEFENDANTS IN ASBESTOS LITIGATION?</p> <p>6 A I HAVE.</p> <p>7 Q OKAY. IN FAIRNESS, MOST OF IT IS FOR</p> <p>8 PLAINTIFFS; IS THAT RIGHT?</p> <p>9 A MOST OF THE TIME WHEN IT COMES TO THIS STAGE,</p> <p>10 IT'S FOR PLAINTIFFS.</p> <p>11 Q OKAY. HAVE YOU CONSULTED MANY, MANY TIMES</p> <p>12 WITH DEFENDANTS IN ASBESTOS LITIGATION?</p> <p>13 A I HAVE.</p> <p>14 Q WHAT'S YOUR RATE THAT YOU CHARGE PER HOUR?</p> <p>15 A \$550 AN HOUR.</p> <p>16 Q NOW, HOW LONG HAVE YOU BEEN DOING THIS TYPE OF</p> <p>17 WORK, THE TESTING WORK AND THEN GETTING INTO ACTUALLY</p> <p>18 COMING AND TELLING JURIES ABOUT WHAT YOU FOUND?</p> <p>19 A LET'S SEE. MAS JUST HAD ITS 30-YEAR</p> <p>20 ANNIVERSARY, AND IT'S PROBABLY ONE OR TWO YEARS AFTER</p> <p>21 MAS STARTED THAT I STARTED TESTIFYING. SO 28 YEARS.</p> <p>22 Q AND OVER THAT TIME, HAVE YOU MADE INTO THE</p> <p>23 MILLIONS DOING TESTIMONY AND SO FORTH?</p> <p>24 A OUR LABORATORY HAS BILLED IN THE MILLIONS OVER</p> <p>25 THAT TIME.</p> <p>26 Q OKAY. I DID WANT TO ASK YOU UNDER LABORATORY</p> <p>27 CERTIFICATION, IS YOUR LABORATORY CERTIFIED?</p> <p>28 A IT IS.</p>	<p>1 FEDERAL GOVERNMENT OR THE ENVIRONMENTAL PROTECTION</p> <p>2 AGENCY. THAT CERTIFIES YOU AGAIN FOR US TO DO</p> <p>3 TRANSMISSION ELECTRON MICROSCOPY ANALYSIS, AIR SAMPLES</p> <p>4 FOR ASBESTOS, AS WELL AS BULK SAMPLES FOR ASBESTOS.</p> <p>5 Q AND THEN IT ALSO SAYS FDA COMPLIANT. WHAT</p> <p>6 DOES THAT MEAN?</p> <p>7 A WE'RE AN FDA REGISTERED LABORATORY. SO WE CAN</p> <p>8 RECEIVE ANY TYPE OF -- FROM SCHEDULE 2 TO SCHEDULE 3,</p> <p>9 SCHEDULE 4 ANTIBIOTICS. SO OUR LABORATORY IS REGISTERED</p> <p>10 AND AUDITED BY THE FDA TO DO WORK IN THE PHARMACEUTICAL</p> <p>11 INDUSTRY.</p> <p>12 WE ALSO HAVE OUR DEA LICENSE SO THAT WE CAN</p> <p>13 RECEIVE THESE MATERIALS AND EVERYTHING FROM -- SAY YOU</p> <p>14 HAVE STREPTOMYCIN ANTIBIOTICS AND IT'S 15 PERCENT ACTIVE</p> <p>15 AGENT, MEANING 15 PERCENT OF THE PILL IS SUPPOSED TO BE</p> <p>16 STREPTOMYCIN, SO WE CAN VALIDATE THAT.</p> <p>17 HOW LONG CAN YOU STORE A TYPICAL TYPE OF DRUG</p> <p>18 BEFORE IT MEETS ITS SHELF LIFE WHERE IT LITERALLY WILL</p> <p>19 SIT IN A PARTICULAR AREA OF THE LIGHTS ON, LIGHTS OFF?</p> <p>20 ALL KINDS OF INTERESTING THINGS.</p> <p>21 Q YEAH, BECAUSE I ALWAYS WONDER WHEN YOU TAKE A</p> <p>22 PILL, HOW DO YOU KNOW WHAT'S IN THERE IS VITAMIN C. SO</p> <p>23 YOU GUYS CAN TEST THAT?</p> <p>24 A WE CAN TEST IT, AND THEY HAVE TO AUDIT IT.</p> <p>25 AND THE FDA AUDITS ARE THE MOST INTENSE. YOU LITERALLY</p> <p>26 GET A CALL FROM THE OFFICE AND SAY THERE'S TWO FDA</p> <p>27 AGENTS HERE FOR YOUR AUDIT.</p> <p>28 Q OKAY. AND THEN THE LAST ENTRY, IT SAYS</p>

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11 (Pages 1723 to 1726)

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<p>1 "ASBESTOS PRODUCT TESTING, 300 TO 400,000 ANALYSES 2 CONDUCTED OVER 30 YEARS." 3 IS THAT YOU AND PEOPLE UNDER YOUR SUPERVISION 4 CONDUCTING ANALYSIS FOR ASBESTOS? 5 A YES, IT'S JUST NOT ME. WE HAVE A 20,000 6 SQUARE FOOT LABORATORY, 38 EMPLOYEES. WE HAVE OTHER 7 MATERIAL SCIENTISTS LIKE MYSELF. WE HAVE ORGANIC 8 CHEMISTS. WE HAVE ANORGANIC CHEMISTS. WE HAVE 9 GEOLOGISTS, CERTIFIED INDUSTRIAL HYGIENISTS, INDUSTRIAL 10 HYGIENISTS, MICROSCOPISTS, OPTICAL MICROSCOPISTS, TEM, 11 OR TRANSMISSION ELECTRON MICROSCOPY MICROSCOPISTS. I'M 12 TRYING TO THINK OF WHAT ELSE. BIOLOGISTS, 13 MICROBIOLOGIST. I DON'T WANT TO LEAVE THEM OUT. 14 Q OKAY. LET ME RUN BACK TO YOUR RESUME. UNDER 15 PUBLICATIONS AND PRESENTATIONS, HAVE YOU PUBLISHED AND 16 PRESENTED ON THE THINGS THAT YOU HAVE STUDIED? 17 A YES, SIR, I HAVE. 18 Q DOES THAT RUN THE GAMUT FROM THINGS LIKE THE 19 FUMES THAT YOU'VE TESTED AS WELL AS ASBESTOS? 20 A YES. EVERYTHING FROM WELDING FUMES TO 21 VOLATILE ORGANIC COMPOUNDS TO ASBESTOS TO DEVELOPMENT OF 22 A CANCER DRUG DELIVERY SYSTEM WHEN I WAS IN GRADUATE 23 SCHOOL. JUST A WIDE RANGE OF THINGS INVOLVING SOME SORT 24 OF MICRO-TYPE PARTICULATE OR MICROANALYSIS. 25 Q AND HAVE ANY OF YOUR PUBLICATIONS BEEN IN THE 26 PEER-REVIEWED LITERATURE? 27 A YES, SIR, IT HAS. 28 Q OKAY. HAVE YOU PUBLISHED ON FINDINGS OF</p>	<p>1 Q AND YOU SAID THE JOURNAL OF CANCER? 2 A JOURNAL OF CANCER IN 1995. 3 Q OKAY. SO LET'S CHAT A LITTLE BIT ABOUT 4 MICROSCOPY. WE'VE HEARD ABOUT IT. AND I WANT TO -- I'M 5 GOING TO ASK YOU SOME ABOUT THAT. 6 FIRST OF ALL, WHEN I ASK YOU A SCIENTIFIC 7 QUESTION FOR A CONCLUSION, WILL YOU KEEP IT TO A 8 REASONABLE DEGREE OF SCIENTIFIC CERTAINTY? 9 A YES, SIR, I WILL. 10 Q BY THE WAY, LET ME JUST ASK YOU SINCE I ASKED 11 IT ABOUT THE CIGARETTES. HAS THERE ACTUALLY BEEN 12 PUBLISHED LITERATURE WHERE INDIVIDUALS HAVE PUBLISHED IN 13 THE PEER-REVIEWED LITERATURE THE ANALYSIS OF VINTAGE 14 TALC PRODUCTS THAT GO BACK DECADES AND DECADES? 15 A YES, SIR. 16 Q WHO'S DONE THAT? 17 A WELL, GORDON DID THAT AS WELL AS PIERCE, ET 18 AL. 19 Q OKAY. PIERCE, AND WHEN DID THAT COME OUT? 20 A I THINK LAST YEAR. TOWARDS THE END OF LAST 21 YEAR, IF I'M NOT MISTAKEN. 22 Q DID THEY -- IN THE PIERCE ARTICLE THAT WAS 23 PUBLISHED IN THE PEER REVIEW, OR IN THE GORDON ARTICLE 24 DID THEY HAVE A RECORD OR A CHAIN OF CUSTODY GOING ALL 25 THE WAY BACK UNTIL WHEN THAT BOTTLE WAS PURCHASED OFF 26 THE SHELF? 27 A NO. 28 Q BASED ON WHAT WAS PUBLISHED IN THOSE ARTICLES,</p>
Page 1724	Page 1726
<p>1 ASBESTOS THAT YOU HAVE USED TEM OR TRANSMISSION ELECTRON 2 MICROSCOPY FOR? 3 A YES. ONE OF THE FIRST BIG ONES WAS THE 4 PUBLICATION IN THE JOURNAL OF CANCER WITH OUR KENT 5 MICRONITE CIGARETTE STUDIES. 6 Q OKAY. SO LET ME ASK YOU ABOUT THAT. YOU SAID 7 KENT MICRONITE CIGARETTE STUDIES. WAS THERE A CIGARETTE 8 AT SOME POINT IN TIME THAT ACTUALLY PUT ASBESTOS IN THE 9 FILTERS? 10 A SADLY, YES. IT WAS FROM 1951 TO APPROXIMATELY 11 1955, AND IT WAS SOLD BY LORILLARD OR KENT CIGARETTES. 12 IT WAS THEIR FIRST FILTERED PRODUCT, AND BESIDES -- THEY 13 USUALLY USED METHYL CELLULOSE FIBERS. THEY PACKED IT 14 WITH CROCIDOLITE ASBESTOS. 15 Q SO LET ME JUST WALK INTO THIS JUST FOR A 16 MINUTE, WHICH IS JUST -- YOU SAID THOSE CIGARETTES WERE 17 FROM THE '50S? 18 A '51 TO '56. 19 Q DID YOU OBTAIN VINTAGE CIGARETTES AND THEN 20 TEST THOSE? 21 A YES. 22 Q AND WERE YOU ABLE TO RELIABLY ESTABLISH THAT 23 THEY WOULD HAVE RELEASED ASBESTOS IN THE SAME WAY AS 24 THEY WOULD HAVE IN THE 1950S? 25 A YES. 26 Q AND WAS THAT PUBLISHED IN THE PEER-REVIEWED 27 LITERATURE? 28 A YES, SIR.</p>	<p>1 WITHOUT QUOTING FROM THEM BECAUSE WE CAN'T DO THAT, BUT 2 WITHOUT QUOTING FROM THEM, WERE THOSE BOTTLES 3 SUFFICIENTLY RELIABLE FOR THOSE SCIENTISTS TO DRAW 4 CONCLUSIONS ABOUT WHAT WAS IN THEM? 5 MR. BAILEY: OBJECTION, YOUR HONOR. CALLS FOR 6 SPECULATION. 7 THE COURT: LET ME HAVE THE QUESTION READ 8 BACK, PLEASE. 9 (RECORD READ.) 10 MR. BAILEY: OBJECTION, YOUR HONOR. CALLS FOR 11 SPECULATION AND HEARSAY. I MEAN, RELEVANCE. I'M SORRY 12 THE COURT: I'M GOING TO SUSTAIN THE 13 OBJECTION. I THINK YOU CAN REPHRASE IT. 14 MR. PANATIER: SURE. I'LL REPHRASE IT, YOUR 15 HONOR. 16 BY MR. PANATIER: 17 Q DID THOSE RESEARCHERS ACTUALLY STUDY WHAT WAS 18 IN THE BOTTLES? 19 A YES. 20 Q AND BY THE WAY, WERE THESE SAMPLES OF COSMETIC 21 TALC THAT THEY WERE STUDYING? 22 A YES. 23 Q DID THOSE RESEARCHERS, BASED ON HISTORICAL 24 BOTTLES, DRAW CONCLUSIONS AS TO WHAT WAS FOUND IN THE 25 BOTTLES? 26 A YES. 27 Q OKAY. ALL RIGHT. SO LET'S TALK A LITTLE BIT 28 ABOUT MICROSCOPY. OH, AND BY THE WAY, IS LOOKING AT AND</p>

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<p>1 RELYING UPON VINTAGE HISTORICAL SAMPLES SOMETHING YOU 2 HAVE DONE THROUGHOUT YOUR CAREER? 3 A YES. 4 Q IS THAT SOMETHING YOU DID JUST LIKE PIERCE AND 5 GORDON, THESE OTHERS, FOR THE JOHNSON & JOHNSON SAMPLES? 6 MR. BAILEY: OBJECTION. LEADING, YOUR HONOR. 7 THE COURT: SUSTAINED. 8 BY MR. PANATIER: 9 Q OKAY. WE'RE GOING TO GET MORE INTO THE 10 JOHNSON & JOHNSON SAMPLES, BUT GENERALLY GIVE US THE 11 GENERAL CATEGORIES OF SAMPLES YOU HAD WHEN YOU TESTED 12 THEM AS FAR AS WHERE THEY CAME FROM. 13 MR. BAILEY: EXCUSE ME, YOUR HONOR. I THINK 14 THAT'S ALREADY SUBJECT OF A MOTION. I THOUGHT WE WERE 15 GOING TO APPROACH THE BENCH FOR. 16 MR. PANATIER: THIS IS TO LAY A FOUNDATION. 17 THE COURT: OKAY. APPROACH SIDEBAR. 18 MR. PANATIER: YOUR HONOR, I'LL DO THIS AND 19 THEN I'LL GET BACK TO THAT. 20 THE COURT: ALL RIGHT. LET'S PROCEED. 21 BY MR. PANATIER: 22 Q ALL RIGHT. I'M JUMPING AHEAD AND I DO THAT. 23 LET'S TALK ABOUT TRANSMISSION ELECTRON 24 MICROSCOPY. 25 A OKAY. 26 Q HOW LONG HAVE YOU BEEN DOING THAT? 27 A SINCE 1983. 1984. 28 Q ALL RIGHT. AND UP HERE WE HAVE THIS TABLE,</p>	<p>1 PICK-UP STICKS. IF YOU HAVE AT LEAST THREE FIBERS 2 INTERSECTING LIKE THIS, YOU CALL IT A CLUSTER. THE 3 BUNDLE, YOU HAVE TO HAVE AT LEAST THREE FIBERS TOUCHING 4 TO CALL IT A BUNDLE. 5 Q SO WHAT DO YOU CALL IT IF YOU ONLY HAVE TWO 6 FIBERS TOUCHING? 7 A YOU SHOULD CALL IT A SINGLE FIBER. IF YOU 8 LOOK, IF YOU LOOK AT IT AND SEE THERE'S ONE OTHER. THAT 9 DOESN'T HAPPEN TOO OFTEN BUT EVERY NOW AND THEN. 10 Q OKAY. SO WHAT'S THIS A PICTURE OF? 11 A THIS IS OUR NEW SCANNING ELECTRON -- SCANNING 12 ELECTRON MICROSCOPE. IT'S A NEW STATE OF THE ART FIELD 13 EMISSION SCANNING ELECTRON MICROSCOPE IN OUR LABORATORY. 14 Q WHAT'S THE DIFFERENCE BETWEEN SCANNING 15 ELECTRON MICROSCOPE AND TRANSMISSION ELECTRON 16 MICROSCOPE? 17 A IN TRANSMISSION ELECTRON MICROSCOPE THE SAMPLE 18 GOES IN THE MIDDLE OF THE MICROSCOPE. SO YOU HAVE AN 19 ELECTRON BEAM COMING DOWN. SAY THIS IS ONE FIBER. 20 ELECTRONS ARE POINTED INTO A BEAM, HITS THE FIBER. 21 DEPENDING ON THE SIZE OF THE FIBER OR HOW THICK IT IS, 22 SOME ELECTRONS WILL GO THROUGH; SOME WON'T. SO YOU GET 23 CONTRAST DIFFERENCE. 24 THINK OF AN X-RAY. YOU STICK YOUR HAND OUT 25 THERE. THEY'RE ACTUALLY PHOTOGRAPHING UNDERNEATH. THE 26 DENSE BONE IS LIGHTER AND AROUND THE TISSUE IS DARKER. 27 IT'S GOT A CONTRAST IN. 28 THE TRANSMISSION ELECTRON MICROSCOPE, YOU</p>
Page 1728	Page 1730
<p>1 AND YOU AND I HAVE LOOKED AT THIS BEFORE. SINGLE 2 FIBERS, FIBER BUNDLES, AND CLUSTERS. 3 A YES. 4 Q WHAT SIGNIFICANCE DO THOSE LABELS HAVE? 5 A WELL, IF YOU GO TO THE SINGLE FIBER, YOU CAN 6 SEE ONE STRUCTURE. IT HAS PARALLEL SIDES, AND YOU DON'T 7 SEE ANY OTHER ADDITIONAL FIBERS ATTACHED TO IT. 8 THESE ARE THE COUNTING RULES OR THE PROTOCOLS 9 WHEN WE DO TRANSMISSION ELECTRON MICROSCOPY. 10 THE SECOND ONE IS A BUNDLE, AND IF YOU LOOK AT 11 THE ENDS, YOU CAN SEE THAT THIS HAS PARALLEL SIDES, BUT 12 IT'S STEPPED BECAUSE YOU HAVE NUMBERS OF FIBERS, AND IF 13 YOU LOOK CLOSE, YOU CAN SEE INDIVIDUAL FIBERS. 14 THIS COUNTING PROTOCOL FOR FIBERS WAS 15 DEVELOPED AND ACCEPTED SOME YEARS AGO WHEN THEY WERE 16 TRYING TO GET CONSISTENCY THROUGHOUT ALL THE 17 LABORATORIES. WE CAN ALL AGREE THAT IT'S ONE BUNDLE. 18 NOBODY IN THE LABORATORIES FROM ALL THE DIFFERENT 19 LABORATORIES COULD EVER AGREE HOW MANY FIBERS IN THERE. 20 JUST LOOKING AT THAT BUNDLE AND DOING THIS FOR SO LONG, 21 I WOULD ESTIMATE SOMEWHERE BETWEEN 20 TO 50 INDIVIDUAL 22 FIBERS. 23 Q BUT YOU SAID UNDER THE COUNTING PROTOCOL, IN 24 ORDER TO TRY TO GET ALL THE LABS ON THE SAME PAGE, THEY 25 WOULD SAY THAT'S ONE BUNDLE? 26 A ONE STRUCTURE, ONE BUNDLE. THAT'S ALL YOU CAN 27 CALL IT. 28 AND THEN THE LAST ONE IS LIKE WHAT I CALL</p>	<p>1 CAN'T SEE THINGS VERY THICK, BECAUSE IF YOU HAVE TOO 2 MUCH ON IT, IT'S JUST DARK. 3 THE SCANNING ELECTRON MICROSCOPE, AS THE NAME 4 IMPLIES, TAKES THAT ELECTRON BEAM AND SCANS IT ACROSS 5 YOUR SAMPLES REAL FAST LIKE A TV USED TO DO IN THE OLD 6 DAYS. AND WHILE IT'S SCANNING THAT SAMPLE, AREAS THAT 7 STICK OUT A LOT ARE EJECTING ELECTRONS BECAUSE THE 8 POWER. THOSE ELECTRONS ARE THEN CAPTURED IN THE 9 MICROSCOPE, WHICH IS BEYOND MY PAY GRADE THROUGH ALL THE 10 ELECTRONICS HOW IT DOES IT, RECREATES THAT SAMPLES. THE 11 MORE ELECTRONS, THE SAMPLE IS LIGHTER. THE LESS 12 ELECTRONS, IT'S DARKER. 13 IT'S REALLY GOOD FOR SURFACE FEATURES. IF 14 YOU'VE GOT VERY SMALL CRACKS OR YOU WANT TO SEE THE 15 CURVATURE OF A FIBER, SO IT'S A VERY IMPORTANT TOOL IN 16 MATERIAL SCIENCE. 17 Q OKAY. AND THEN HERE'S ANOTHER TEM. DO YOU 18 GUYS HAVE MORE THAN ONE TEM THERE AT MAS? 19 A WE HAVE FOUR. IF YOU LOOK AT THE MIDDLE OF 20 THAT TALL COLUMN, THAT'S WHERE THE SAMPLE GOES IN. 21 Q THAT SILVER THING THERE? 22 A RIGHT THERE. SO UP AT THE TOP IS THAT CABLE 23 COMING IN THE TOP IS THE VOLTAGE. THESE MICROSCOPES RUN 24 OUT ABOUT 120,000 VOLTS. GOT A LITTLE FILAMENT IN 25 THERE, AND ALL OF THAT VOLTAGE CAUSES ELECTRONS TO SPEW 26 OUT. 27 THEN THE LENSES IN THIS THING ARE ALL 28 ELECTROMAGNETIC. SO THE ELECTRONS HEAD DOWN THE COLUMN,</p>

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<p>1 AND THE ELECTROMAGNETIC LENSES START GETTING INTO A FINE</p> <p>2 POINT.</p> <p>3 AND IT GOES THROUGH THE SAMPLE, AND THEN THE</p> <p>4 LENSES DO THE OPPOSITE, START SPREADING IT OUT. AND</p> <p>5 WHERE WE HAVE THAT LITTLE COVER THERE IS WHERE THE</p> <p>6 ANALYST LOOKS BECAUSE IT'S A FLORESCENT SCREEN. YOU SEE</p> <p>7 THE TWO KNOBS ON EACH SIDE. THAT'S HOW HE TURNS IT.</p> <p>8 SO THAT MICROSCOPE WEIGHS MAYBE 10,000 POUNDS.</p> <p>9 YOU HAVE TO HAVE A VACUUM BECAUSE ELECTRONS AREN'T VERY</p> <p>10 STRONG. IF YOU HAVE AIR MOLECULES IN THERE, IT WILL HIT</p> <p>11 IT AND NOT GO ANYWHERE. AND THE SAMPLES THAT YOU CAN</p> <p>12 LOOK AT CAN ONLY FIT ON A 3-MILLIMETER GRID.</p> <p>13 Q OKAY. SO THEY'RE VERY SMALL SAMPLES?</p> <p>14 A CORRECT.</p> <p>15 Q HOW MUCH DOES A MICROSCOPE LIKE THAT COST?</p> <p>16 A WE JUST HAD A NEW STATE OF THE ART ONE COME</p> <p>17 IN. I THINK EVERYTHING ON IT IS ABOUT \$700,000.</p> <p>18 Q IS THAT IT? IS THAT THE NEW ONE?</p> <p>19 A NO, IT REPLACES THAT ONE. THAT WAS OUR 200KV,</p> <p>20 200,000-VOLT RESOLUTION. IT GOT RETIRED FOR A BRAND-NEW</p> <p>21 ONE.</p> <p>22 Q OKAY.</p> <p>23 A ALL RIGHT.</p> <p>24 Q SO LET'S TALK ABOUT YOUR METHODOLOGIES. YOU</p> <p>25 ANALYZED JOHNSON'S BABY POWDER; IS THAT RIGHT?</p> <p>26 A THAT'S RIGHT.</p> <p>27 Q BEFORE WE TALK ABOUT THE RESULTS AND ALL OF</p> <p>28 THAT, LET'S TALK ABOUT THE METHODOLOGIES. HAVE YOU BEEN</p>	<p>1 DROP INSTEAD OF MOST OF THE CUP.</p> <p>2 WHAT'S CHALLENGING, BECAUSE YOU'RE IN THE</p> <p>3 ELECTRON MICROSCOPE, IF YOU GET TALC PARTICLES ON TOP OF</p> <p>4 EACH OTHER, YOU CAN'T SEE ANYTHING BECAUSE THE ELECTRON</p> <p>5 BEAM CAME THROUGH. SO YOU HAVE TO REDUCE THE AMOUNT OF</p> <p>6 TALC BUT NOT REDUCE THE AMOUNT OF ASBESTOS. IT'S A</p> <p>7 BALANCING ACT. SO IT'S VERY CHALLENGING.</p> <p>8 Q OKAY. WERE YOU ABLE TO FIND A METHOD THAT</p> <p>9 ALLOWED YOU TO DO THAT?</p> <p>10 A YES.</p> <p>11 Q WHAT METHOD WAS THAT?</p> <p>12 A WELL, WE CALL IT THE BLOUNT METHOD. IT'S A</p> <p>13 HEAVY LIQUID DENSITY METHOD.</p> <p>14 MR. PANATIER: ALL RIGHT. AND LET ME -- THIS</p> <p>15 WILL BE EXHIBIT 928.</p> <p>16</p> <p>17 (PLAINTIFFS' EXHIBIT 928 MARKED FOR</p> <p>18 IDENTIFICATION.)</p> <p>19</p> <p>20 BY MR. PANATIER:</p> <p>21 Q SO I'M HOLDING UP A PAPER CALLED "AMPHIBOLE</p> <p>22 CONTENT OF COSMETIC AND PHARMACEUTICAL TALCS" BY A.M.</p> <p>23 BLOUNT. IS THIS WHERE YOU -- YOUR METHOD ORIGINATED?</p> <p>24 A YES. IT'S ESSENTIALLY HER METHOD.</p> <p>25 DR. BLOUNT.</p> <p>26 Q THIS SAYS IT WAS PUBLISHED IN 1991. IS THIS</p> <p>27 WHERE YOU GOT THE METHOD TO TRY TO SEPARATE OUT THE TALC</p> <p>28 SO YOU COULD SEE WHAT ASBESTOS, IF ANY, WAS PRESENT?</p>
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<p>1 FOLLOWING DIFFERENT METHODOLOGIES THROUGHOUT YOUR CAREER</p> <p>2 WHEN YOU HAVE ANALYZED PRODUCTS OR AIR SAMPLES FOR</p> <p>3 ASBESTOS?</p> <p>4 A YES.</p> <p>5 Q OKAY. AND WHEN IT COMES TO ANALYZING TALC,</p> <p>6 WERE THERE ANY PARTICULAR CHALLENGES THAT YOU WERE</p> <p>7 PRESENTED WITH?</p> <p>8 A YES.</p> <p>9 Q AND WHAT WAS THAT?</p> <p>10 A FIRST CHALLENGE IS THAT THE ASBESTOS, THE</p> <p>11 AMOUNT OF ASBESTOS FIBERS IN THE TALC SAMPLES ARE VERY</p> <p>12 SMALL AS COMPARED TO ALL THE TALC. SO THINK OF IT AS</p> <p>13 THIS. YOU HAVE A MILLION TALC PARTICLES AND MAYBE ONE</p> <p>14 TO TWO ASBESTOS FIBERS.</p> <p>15 SO THE CHALLENGE FOR THIS TYPE OF TALC,</p> <p>16 COSMETIC TALC WAS HOW TO GET A CONCENTRATED SAMPLE THAT</p> <p>17 GAVE YOU GOOD ANALYTICAL SENSITIVITY, MEANING TO FIND</p> <p>18 ONE ASBESTOS FIBER, HOW MUCH DO I HAVE TO GET ON TO THE</p> <p>19 SAMPLE TO MAKE THAT REASONABLE AND ELIMINATE THE TALC?</p> <p>20 BECAUSE IF YOU DON'T GET RID OF THE TALC, TO</p> <p>21 GET A SAMPLE WITH WHAT I CALL GOOD ANALYTICAL</p> <p>22 SENSITIVITY, MEANING I HAVE A VERY GOOD DETECTION LIMIT.</p> <p>23 SO SAY I HAD A FULL GLASS OF WATER HERE AND I WANTED TO</p> <p>24 KNOW HOW MUCH LEAD WAS IN THERE. WELL, I WANT TO BE</p> <p>25 ABLE TO TAKE ALL THE WATER IN HERE TO MEASURE THE LEAD</p> <p>26 SO I HAVE A VERY HIGH ANALYTICAL SENSITIVITY VERSUS JUST</p> <p>27 TAKING A LITTLE DROP OUT AND SAYING OKAY, WELL, THERE'S</p> <p>28 NOTHING IN THERE BECAUSE I ONLY MEASURED THIS LITTLE</p>	<p>1 A YES.</p> <p>2 Q AND IT'S THE HEAVY LIQUID SEPARATION METHOD.</p> <p>3 OKAY. LET'S START THERE. HEAVY LIQUID SEPARATION.</p> <p>4 WHAT DOES THAT MEAN?</p> <p>5 A SO WATER WEIGHS ABOUT 1 GRAM PER CENTIMETER.</p> <p>6 SO YOU TAKE A CUBE LIKE A SUGAR CUBE, AND IF YOU PUT</p> <p>7 WATER IN THAT AND WEIGH IT, IT'S ABOUT 1 GRAM OR SO.</p> <p>8 WHEN YOU GET THE LIQUIDS THAT HAVE MORE</p> <p>9 DENSITY, SAY NOW MY 1 CUBIC GRAM WEIGHS 2.6 GRAMS PER</p> <p>10 CUBIC CENTIMETERS. SO IT'S HEAVIER THAN WATER.</p> <p>11 SO THINK OF IT AS I'VE GOT A BUNCH OF CORK</p> <p>12 PARTICLES AND I'VE ALSO GOT A BUNCH OF SAND, AND I PUT</p> <p>13 IT IN WATER AND I SHAKE IT UP AND JUST LET IT SIT THERE,</p> <p>14 AND I WANT TO GET THE CORK OUT, AND I WANT IT AT THE TOP</p> <p>15 BECAUSE IT FLOATS.</p> <p>16 THE HEAVY LIQUID DOES THE SAME THING. THE</p> <p>17 TALC HAS LOWER DENSITY OR IT WEIGHS LESS THAN THE</p> <p>18 ASBESTOS FIBER WE'RE LOOKING FOR. SO IF I PUT IT IN A</p> <p>19 LIQUID THAT'S HEAVIER THAN THE TALC PARTICLES, THE</p> <p>20 DENSITY IS MORE BUT LESS THAN THE ASBESTOS SAMPLES. I</p> <p>21 CAN THEN PUT THAT TOGETHER, PUT IT IN A CENTRIFUGE, SPIN</p> <p>22 IT REAL FAST. THE TALC GOES TO THE TOP AND THE ASBESTOS</p> <p>23 GOES TO THE BOTTOM. SO IT'S MY HEAVY LIQUID DENSITY</p> <p>24 SEPARATION I CAN GET THE ASBESTOS OUT OF THE BOTTOM OF</p> <p>25 THE TEST TUBE AND TAKE THE TALC OUT FROM THE TOP. IT'S</p> <p>26 A WAY TO CONCENTRATE IT.</p> <p>27 Q OKAY. SO BASICALLY THE TALC PARTICLES WOULD</p> <p>28 BE THE CORK IN THE ANALOGY AND THE ASBESTOS WOULD BE THE</p>

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<p>1 SAND IN THE ANALOGY?</p> <p>2 A YES.</p> <p>3 Q OKAY. AND THIS METHOD, WHEN SHE DID IT IN</p> <p>4 1991, WHAT WAS SHE LOOKING AT IT?</p> <p>5 A COSMETIC TALC.</p> <p>6 Q OKAY. AND DID SHE -- THROUGH HER METHOD, WAS</p> <p>7 SHE ABLE TO SEPARATE OUT THE TALC AND BETTER ISOLATE ANY</p> <p>8 ASBESTOS TO THE EXTENT IT WAS PRESENT?</p> <p>9 A YES.</p> <p>10 Q AND DID SHE FIND ASBESTOS?</p> <p>11 A SHE DID.</p> <p>12 Q WHAT DID SHE FIND IT IN?</p> <p>13 A SHE FOUND IT IN A COUPLE ORE SAMPLES AS WELL</p> <p>14 AS A JOHNSON & JOHNSON BABY POWDER SAMPLE OFF THE SHELF.</p> <p>15 Q OKAY. SO I'M GOING TO ASK YOU ABOUT THIS AS</p> <p>16 WELL. ISO METHOD 22262-2. THERE'S A LOT OF 2S THERE.</p> <p>17 WHAT IS THIS?</p> <p>18 A THIS IS THE INTERNATIONAL STANDARDS</p> <p>19 ORGANIZATION WHICH IS ESSENTIALLY A WORLDWIDE ANALYTICAL</p> <p>20 ORGANIZATION THAT PUTS PROTOCOLS, AGAIN, LIKE A RECIPE</p> <p>21 TOGETHER THAT PUBLISHES THEM TO SHOW YOU HOW TO DO</p> <p>22 THINGS WITH DIFFERENT TYPES OF ANALYSIS.</p> <p>23 THIS ONE INVOLVES ASBESTOS BY GRAVIMETRIC AND</p> <p>24 MICROSCOPY METHODS.</p> <p>25 Q DOES IT INVOLVE USING HEAVY LIQUID DENSITY</p> <p>26 SEPARATION JUST LIKE BLOUNT?</p> <p>27 A YES, SIR. IT HAS A WHOLE SECTION ON</p> <p>28 MEASURING. ANALYZING TALC USING THE HEAVY DENSITY</p>	<p>1 FAIR?</p> <p>2 A THAT'S FAIR.</p> <p>3 Q WAS JOHNSON & JOHNSON 20 YEARS BEFORE BLOUNT,</p> <p>4 WERE THEY USING A HEAVY LIQUID SEPARATION METHOD?</p> <p>5 A ONE OF THEIR GROUPS THAT THEY WERE RESEARCHING</p> <p>6 PROPOSED IT.</p> <p>7 Q THEY PROPOSED. WAS IT EVER ADOPTED FOR</p> <p>8 ROUTINE TESTING?</p> <p>9 A NO, NOT THAT I CAN TELL.</p> <p>10 Q ALL RIGHT. SO YOU PUT UP THESE FOUR DIFFERENT</p> <p>11 TYPES OF ASBESTOS HERE: CHRYSOTILE, ANTHOPHYLLITE,</p> <p>12 TREMOLITE, AND ACTINOLITE.</p> <p>13 WHEN YOU SAID THAT THE HEAVY LIQUID SEPARATION</p> <p>14 METHOD ALLOWS YOU TO SEPARATE THE ASBESTOS FROM THE</p> <p>15 TALC, DOES IT HAVE SOME DISADVANTAGES?</p> <p>16 A IT DOES.</p> <p>17 Q AND WHAT'S THE DISADVANTAGE?</p> <p>18 A FIRST THE CHRYSOTILE.</p> <p>19 Q UH-HUH.</p> <p>20 A IT HAS ABOUT THE SAME DENSITY AS TALC. SO IF</p> <p>21 YOU USE THIS METHOD, YOU'RE NOT GOING TO BE ABLE TO</p> <p>22 ANALYZE AND SAY IT HAS CHRYSOTILE ASBESTOS OR NOT.</p> <p>23 Q IS THAT BECAUSE CHRYSOTILE HAS SOME DENSITY</p> <p>24 THAT GETS PULLED OUT WHEN YOU TRY TO REMOVE THE TALC?</p> <p>25 A IT'S THE SAME AS THE TALC.</p> <p>26 Q IT'S THE SAME AS THE TALC?</p> <p>27 A YES. THINK OF IT AS DIFFERENT COLOR CORK. SO</p> <p>28 IT'S ABOUT 2.6 TO 2.8. TALC IS ABOUT 2.6. CHRYSOTILE</p>
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<p>1 LIQUID 2.85 GRAMS PER CUBIC CENTIMETER. THAT'S HOW MUCH</p> <p>2 1 CUBIC CENTIMETER OF IT WOULD WEIGH. AND IT SHOWS YOU</p> <p>3 HOW TO USE OPTICAL MICROSCOPY TO ANALYZE IT, SCANNING</p> <p>4 ELECTRON MICROSCOPY IF YOU SO WISH, OR TRANSMISSION</p> <p>5 ELECTRON MICROSCOPY. SO WE HAVE THREE CHOICES, EITHER</p> <p>6 ONE OF THEM OR ALL OF THEM.</p> <p>7 Q OKAY. AND WE TALKED ABOUT R. J. LEE BEFORE,</p> <p>8 WHICH IS WHERE MATTHEW SANCHEZ WORKS. WE'RE GOING TO</p> <p>9 HEAR FROM HIM I THINK TOMORROW OR THE NEXT DAY. HAS R.</p> <p>10 J. LEE UTILIZED THIS VERY METHOD THAT YOU HAVE EMPLOYED</p> <p>11 TO LOOK FOR ASBESTOS IN THE JOHNSON'S BABY POWDER</p> <p>12 SAMPLES TO LOOK FOR ASBESTOS IN TALC AS WELL?</p> <p>13 A YES.</p> <p>14 Q IS THE BLOUNT METHOD TO TRY TO ISOLATE OUT THE</p> <p>15 ASBESTOS FROM THE TALC A RELIABLE AND ACCEPTED METHOD,</p> <p>16 SIR?</p> <p>17 A YES. YOU HAVE TO UNDERSTAND THE HEAVY DENSITY</p> <p>18 LIQUID METHOD HAS BEEN USED FOR YEARS AND YEARS TO</p> <p>19 SEPARATE MINERAL PRODUCTS, ANY TYPE OF PARTICULATE.</p> <p>20 ALICE BLOUNT WAS THE FIRST TO ACTUALLY USE IT</p> <p>21 AND PUBLISH IT. NOT THE FIRST TO USE IT BUT TO PUBLISH</p> <p>22 IT. BUT IT HAS BEEN USED FOR MANY YEARS, AND OTHERS</p> <p>23 HAVE TALKED ABOUT IT FOR USING IN TALC.</p> <p>24 Q AND, IN FACT -- AND I'M GOING TO GET TO ALL OF</p> <p>25 THIS, BUT HAVE YOU REVIEWED HUNDREDS AND HUNDREDS OF</p> <p>26 JOHNSON & JOHNSON INTERNAL DOCUMENTS?</p> <p>27 A YES, SIR. I HAVE.</p> <p>28 Q ALL RIGHT. STARTING LAST SUMMER; IS THAT</p>	<p>1 IS ABOUT 2.8 GRAMS PER CENTIMETER CUBE. SO IT WOULD GO</p> <p>2 WITH THE TALC.</p> <p>3 Q SO IF YOU USE THIS METHOD, JUST</p> <p>4 HYPOTHETICALLY, THERE COULD BE TALC THERE, BUT YOU</p> <p>5 WOULDN'T KNOW IT BECAUSE YOU PULLED IT OUT? I MEAN</p> <p>6 CHRYSOTILE.</p> <p>7 A CORRECT.</p> <p>8 Q AND WHAT ABOUT ANTHOPHYLLITE?</p> <p>9 A WELL, THAT'S SORT OF LIKE A YES AND NO.</p> <p>10 Q OKAY. AND HOW IS THAT?</p> <p>11 A WELL, ANTHOPHYLLITE, THE CHEMISTRY OF</p> <p>12 ANTHOPHYLLITE CAN GO FROM HAVING A DENSITY OF ABOUT 2.8</p> <p>13 WHERE IT HAS NO IRON, UP TO 3.2 GRAMS PER CUBIC</p> <p>14 CENTIMETER WHERE IT HAS IRON IN IT.</p> <p>15 SO WE HAVE SEEN ANTHOPHYLLITE WITH ELEVATED</p> <p>16 LEVELS OF IRON, AND RECENTLY WE'VE DONE A FEW SAMPLES</p> <p>17 WHERE WE'VE SEEN THE ANTHOPHYLLITE WITH NO IRON. IT</p> <p>18 DOESN'T MAKE SENSE THAT IT SHOULD MAKE IT TO THE BOTTOM,</p> <p>19 BUT THIS METHOD IS NOT A HUNDRED PERCENT EFFICIENT. WE</p> <p>20 ALSO SEE TALC PARTICLES AT THE BOTTOM ALONG WITH THE</p> <p>21 SAND OF THE ASBESTOS. SO IT'S NOT A HUNDRED PERCENT</p> <p>22 EFFICIENT.</p> <p>23 TREMOLITE AND ACTINOLITE ARE ALL ABOUT</p> <p>24 3.2 GRAMS. SO THESE TWO TYPES, THE TREMOLITE SERIES AND</p> <p>25 THEN ACTINOLITE, WHICH IS PART OF THE TREMOLITE SERIES,</p> <p>26 IS WHAT WE PRIMARILY FIND WHEN WE DO THIS ANALYSIS.</p> <p>27 Q AND I CIRCLED TREMOLITE THERE. IS TREMOLITE</p> <p>28 WHAT DR. BLOUNT IDENTIFIED WHEN SHE DID HER STUDY?</p>

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<p>1 A YES.</p> <p>2 Q ALL RIGHT. SO LET ME SEE IF I CAN PUT IT IN</p> <p>3 TERMS THAT I CAN GET AND CLARIFY A LITTLE BIT.</p> <p>4 BECAUSE OF THE DENSITY OF THESE DIFFERENT</p> <p>5 ASBESTOS PARTICLES, THE METHOD -- IT SEEMS LIKE THE</p> <p>6 METHOD IS MORE PREFERENTIAL TOWARDS SOMETHING LIKE</p> <p>7 TREMOLITE BECAUSE OF THE DENSITY; IS THAT FAIR?</p> <p>8 A WELL, TREMOLITE AND ACTINOLITE, WHICH IS A</p> <p>9 FORM OF TREMOLITE, YES, IT IS. YOU WON'T SEE</p> <p>10 CHRYSOTILE. THAT'S THE DRAWBACK. AND IF ANTHOPHYLLITE</p> <p>11 DOESN'T -- ASBESTOS DOESN'T HAVE ANY IRON. YOU MAY OR</p> <p>12 MAY NOT SEE THAT. SO IT HAS ITS GOOD POINTS AND IT HAS</p> <p>13 SOME BAD POINTS.</p> <p>14 Q OKAY. SO WITH THE ANTHOPHYLLITE, YOU SAID IF</p> <p>15 IT HAD SOME IRON, WOULD THAT MAKE IT HEAVIER?</p> <p>16 A WELL, IT MAKES IT DENSER.</p> <p>17 Q I'M SORRY. MORE DENSE?</p> <p>18 A MORE DENSE. SO THE HIGHER DENSITY GOES TO THE</p> <p>19 BOTTOM. AND IT REMOVES 98 PERCENT OF THE TALC.</p> <p>20 ACTUALLY WHEN YOU TAKE IT OUT OF THE CENTRIFUGE, YOU SEE</p> <p>21 A PLUG, A WHITE PLUG AT THE TOP WHERE THE TALC IS.</p> <p>22 Q AND BY THE WAY, A CENTRIFUGE IS WHAT?</p> <p>23 A IT'S A DEVICE WHERE YOU STICK TUBES IN AND YOU</p> <p>24 BALANCE IT, AND YOU TURN IT ON AND IT SPINS. SO IT GETS</p> <p>25 CENTRIPETAL FORCE. PULLS THINGS TO THE BOTTOM OF THE</p> <p>26 TUBE. IT'S A WAY TO SEPARATE OUT STUFF AT THIS LEVEL.</p> <p>27 BUT IT CAN'T PULL THE TALC DOWN BECAUSE IT CAN'T MAKE IT</p> <p>28 THROUGH THE HEAVY DENSITY.</p>	<p>1 RESULTS ARE?</p> <p>2 A YES. MOST OF THESE TEM PROTOCOLS ARE</p> <p>3 HEALTH-BASED PROTOCOLS FOR THE DEFINITION OF ASBESTOS.</p> <p>4 Q SO WHEN THEY PROVIDE A COUNTING PROTOCOL, ARE</p> <p>5 YOU SAYING THAT'S WHAT THEY WANT IDENTIFIED TO THEN MAKE</p> <p>6 THEIR DECISIONS?</p> <p>7 MR. BAILEY: OBJECTION. LEADING, YOUR HONOR.</p> <p>8 THE COURT: OVERRULED.</p> <p>9 THE WITNESS: YES, IT HAS A CERTAIN SIZE RANGE</p> <p>10 FIBER, WHAT THE CRITERIA, THE MINIMUM CRITERIA TO CALL</p> <p>11 IT A FIBER IN ASBESTOS AND BUNDLES AND CLUSTERS. SO IT</p> <p>12 HAS THESE COUNTING PROTOCOLS ON BASICALLY THE RIGHT</p> <p>13 CHEMISTRY, THE RIGHT CRYSTALLINE PATTERNS, THE RIGHT</p> <p>14 CRYSTALS, AND THEN DOES IT HAVE THE RIGHT SIZE TO MEET</p> <p>15 THE HEALTH BASE DEFINITION. IT'S SORT OF LIKE THE</p> <p>16 MINIMUM. THIS IS THE MINIMUM IT HAS TO BE AND THEN</p> <p>17 ANYTHING BIGGER.</p> <p>18 BY MR. PANATIER:</p> <p>19 Q OKAY. SO FOR THE AHERA TEM METHOD, YOU SAID</p> <p>20 IT'S GOT TO BE ONE OF THE SIX MINERALS THAT WE'VE TALKED</p> <p>21 ABOUT. WE'LL JUST CALL THEM THE ASBESTOS MINERALS; IS</p> <p>22 THAT FAIR?</p> <p>23 A THE REGULATED ASBESTOS MINERALS IS PROBABLY</p> <p>24 THE BEST WAY TO SAY IT.</p> <p>25 Q I'LL PUT REGULATED ASBESTOS MINERALS. AND</p> <p>26 THEN YOU SAID IT HAS TO BE A FIBER; RIGHT?</p> <p>27 A YES. IT HAS TO BE -- THE DEFINITION IS IT HAS</p> <p>28 TO BE LONGER THAN 0.5 MICRONS IN LENGTH.</p>
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<p>1 Q BUT YOU STILL SEE A LITTLE BIT OF THE TALC?</p> <p>2 A EVERY SAMPLE WE HAVE, BUT IT ELIMINATES SO</p> <p>3 MUCH OF IT THAT WE THEN DON'T HAVE TO WORRY ABOUT</p> <p>4 OVERLOADING THE SAMPLE.</p> <p>5 Q OKAY. SO LET'S TALK ABOUT THIS SAYS,</p> <p>6 "ASBESTOS IDENTIFICATION PROTOCOL." SO THEN DID YOU</p> <p>7 HAVE TO COME UP WITH A WAY TO IDENTIFY WHETHER OR NOT</p> <p>8 YOU WERE SEEING ASBESTOS ONCE YOU HAD PREPARED IT?</p> <p>9 A YES. WELL, WE DIDN'T REALLY COME UP WITH IT.</p> <p>10 THESE ARE STANDARD PROTOCOLS FOR IDENTIFYING ASBESTOS</p> <p>11 AND WHAT IS THE CRITERIA FOR SAYING IT IS ASBESTOS</p> <p>12 VERSUS NONASBESTOS.</p> <p>13 Q AND AHERA IS A FEDERAL REGULATION; RIGHT?</p> <p>14 A YES, SIR.</p> <p>15 Q AHERA -- WHAT IS THE GENERAL USE THAT THAT'S</p> <p>16 BEEN EMPLOYED FOR THROUGHOUT SINCE IT WAS ESTABLISHED?</p> <p>17 A WHEN IT WAS ESTABLISHED, IT WAS A GUIDANCE FOR</p> <p>18 SCHOOLS AND CONSULTANTS ON HOW TO DEAL WITH ASBESTOS</p> <p>19 ISSUES IN SCHOOLS, THE IDENTIFICATION. IF YOU'RE GOING</p> <p>20 TO REMOVE IT, THEN HOW TO MEASURE ONCE YOU REMOVE THE</p> <p>21 ASBESTOS TO MAKE SURE THE AIR IS CLEAN. SO THEY HAVE A</p> <p>22 PARTICULAR PROTOCOL FOR TRANSMISSION ELECTRON MICROSCOPY</p> <p>23 IN AIR SAMPLES TO DETERMINE IF IT'S A SUCCESS --</p> <p>24 ACCEPTABLE FOR THE KIDS AND TEACHERS AND PEOPLE TO GO</p> <p>25 BACK INTO THE BUILDINGS AFTER THEY'VE REMOVED THE</p> <p>26 ASBESTOS.</p> <p>27 Q IS THIS A METHOD THAT OTHERS WOULD USE TO MAKE</p> <p>28 HEALTH AND SAFETY DETERMINATIONS BASED ON WHATEVER</p>	<p>1 Q DID I FACE THE GREATER THAN SIGN THE RIGHT</p> <p>2 WAY?</p> <p>3 A THAT'S THE RIGHT WAY.</p> <p>4 Q OKAY. SO TO BE A FIBER, IT HAS TO BE GREATER</p> <p>5 THAN HALF A MICRON LONG?</p> <p>6 A CORRECT. AND THEN IT HAS TO HAVE AN ASPECT</p> <p>7 RATIO. THAT'S THE LENGTH TO WIDTH OF AT LEAST 5-TO-1 OR</p> <p>8 GREATER.</p> <p>9 Q OKAY. AND ARE THESE GREATER THAN, OR GREATER</p> <p>10 THAN OR EQUAL TO?</p> <p>11 A GREATER THAN OR EQUAL TO THE ASPECT RATIO.</p> <p>12 AND IT HAS TO HAVE SUBSTANTIALLY PARALLEL SIDES ON THE</p> <p>13 LENGTH.</p> <p>14 Q AND THIS IS THE COUNTING PROTOCOL THAT AHERA</p> <p>15 GIVES YOU?</p> <p>16 A RIGHT. IF YOU'RE ANALYZING -- THIS IS BY</p> <p>17 TRANSMISSION ELECTRIC MICROSCOPY. IF YOU'RE ANALYZING</p> <p>18 IT AND IT MEETS THIS CRITERIA FOR A FIBER, THEN YOU</p> <p>19 WOULD DO THE MICROCHEMISTRY ON IT. WHAT ELEMENTS ARE</p> <p>20 PRESENT BECAUSE EACH OF THESE MINERALS ARE PRETTY</p> <p>21 UNIQUE, AND THEN YOU HAVE TO DETERMINE IT HAS THE RIGHT</p> <p>22 CRYSTALLINE STRUCTURE.</p> <p>23 Q AND WE'VE HEARD SOME OF THAT. DR. COMPTON WAS</p> <p>24 HERE. HE'S TALKED A LITTLE BIT ABOUT THAT.</p> <p>25 FOR ANY ANALYSIS THAT YOU DID ON THESE SAMPLES</p> <p>26 IN THIS CASE, DID YOU DO THE CHEMISTRY AND THE CRYSTAL</p> <p>27 TO VERIFY THE MINERAL?</p> <p>28 A YES.</p>

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<p>1 Q AND YOU SAID THE FIRST THING YOU DO IS REALLY</p> <p>2 YOU'RE LOOKING THROUGH THE TEM, YOU SEE SOMETHING THAT</p> <p>3 YOU CAN IDENTIFY AS A FIBER FAR AS THE SHAPE?</p> <p>4 A A FIBER OR A BUNDLE, OR YOU HAVE MULTIPLE</p> <p>5 FIBERS OR YOU HAVE A MATRIX MATERIAL WITH THE FIBERS</p> <p>6 STICKING OUT OF IT. SORT OF LIKE A HAIRY BALL. THOSE</p> <p>7 ARE THE FOUR THINGS YOU'RE LOOKING FOR.</p> <p>8 Q AND ONCE YOU FIND THAT, THEN YOU SEE IF IT'S</p> <p>9 THE CORRECT MINERAL?</p> <p>10 A CORRECT.</p> <p>11 Q SO WE'RE GOING TO TALK ABOUT SOME OF YOUR</p> <p>12 FOUNDATION BEFORE WE GET TO THE RESULTS HERE ON THIS</p> <p>13 TESTING YOU DID. WHEN DID YOU DO THIS TESTING ON THE</p> <p>14 JOHNSON & JOHNSON SAMPLES?</p> <p>15 A I THINK WE STARTED IN EARLY 2017, AND THEN</p> <p>16 IT'S GONE FORWARD.</p> <p>17 Q ALL RIGHT. AND FOR THE SAMPLES THAT YOU</p> <p>18 LOOKED AT, CAN YOU GIVE US -- WELL, HERE. LET ME GO TO</p> <p>19 RIGHT HERE.</p> <p>20 MR. BAILEY: EXCUSE ME, YOUR HONOR. THIS IS</p> <p>21 PART OF A MOTION THAT WAS TOLD WE WOULD APPROACH ON.</p> <p>22 MR. PANATIER: WE'RE JUST LAYING THE</p> <p>23 FOUNDATION.</p> <p>24 THE COURT: I'M GOING TO ALLOW THIS PORTION TO</p> <p>25 PROCEED.</p> <p>26 BY MR. PANATIER:</p> <p>27 Q SO WE CAN UNDERSTAND WHAT YOU LOOKED AT AND</p> <p>28 WHAT YOU CONSIDERED. WE'VE GOT THE PICTURES. ARE THESE</p>	<p>1 JOHNSON --</p> <p>2 Q OKAY.</p> <p>3 A -- BABY POWDER. THE SHOWER TO SHOWER WENT A</p> <p>4 COUPLE YEARS MORE --</p> <p>5 Q ALL RIGHT.</p> <p>6 A -- FOR THE ITALIAN.</p> <p>7 Q ALL RIGHT. AND THEN WAS THERE EVER ANOTHER</p> <p>8 GAP FOR ITALIAN -- WHEN THE ITALIAN RETURNED OR DID IT</p> <p>9 EVER RETURN?</p> <p>10 A IT RETURNED IN 1980 DUE TO A STRIKE IN THE</p> <p>11 VERMONT MINES.</p> <p>12 Q ALL RIGHT. AND SO THEN TAKE US THROUGH WHEN</p> <p>13 WERE THE -- GENERALLY SPEAKING WE KNOW THERE WAS A</p> <p>14 LITTLE OVERLAP. WHEN WERE THE VERMONT YEARS?</p> <p>15 A WE CAN SAY APPROXIMATELY 1968 TO '69. TAKE</p> <p>16 OUT 1980 AND THEN GO TO APPROXIMATELY 2003 AND 2004.</p> <p>17 Q AFTER 2003, 2004, THEN WHAT SOURCE WAS BEING</p> <p>18 USED?</p> <p>19 A FOR THIS COUNTRY, CHINA.</p> <p>20 Q AND JUST FOR SOME ADDITIONAL FOUNDATION,</p> <p>21 YOU'VE GOT A COUPLE SHOWER TO SHOWER PRODUCTS THAT YOU</p> <p>22 ALSO LOOKED AT. GENERALLY WHEN WERE THOSE FROM AND WHO</p> <p>23 MADE THOSE?</p> <p>24 A THOSE ARE FROM GENERALLY 20 -- 2013, 2014,</p> <p>25 SOMEWHERE IN THAT RANGE. AND THIS WAS MADE BY A COMPANY</p> <p>26 CALLED VALIANT.</p> <p>27 Q NOW, THAT'S NOT JOHNSON & JOHNSON; RIGHT?</p> <p>28 A NO. JOHNSON & JOHNSON SOLD THIS PRODUCT LINE</p>
Page 1744	Page 1746
<p>1 PICTURES THAT YOUR OFFICE TOOK OF THE DIFFERENT BOTTLES?</p> <p>2 A YES.</p> <p>3 Q AND WERE -- CAN YOU GIVE US GENERALLY AN</p> <p>4 APPRECIATION OF THE ERAS THAT THESE BOTTLES CAME FROM?</p> <p>5 A STARTING IN APPROXIMATELY 1943 TO '52, ONE</p> <p>6 SET.</p> <p>7 Q OKAY.</p> <p>8 A AND THEN FROM '52 TO '64, ANOTHER SET. AND</p> <p>9 THAT HAS TO DO WITH WHAT'S ON THE CANS, METAL, PLASTIC.</p> <p>10 FROM '65 ON, WE HAVE ONES THAT ARE IN THAT '65 ON. AND</p> <p>11 THEN WE HAVE ONES THAT ARE -- WE KNOW THAT ARE IN THE</p> <p>12 '90S. AND THEN WE HAVE ONES THAT WE KNOW THAT ARE MORE</p> <p>13 OFF THE SHELF, 2014, 2013. SO IT REPRESENTS THREE</p> <p>14 DIFFERENT MINES.</p> <p>15 Q HAVE YOUR TESTS REPRESENTED THOSE THREE</p> <p>16 DIFFERENT MINES BASED ON THE DATES OF THESE CONTAINERS?</p> <p>17 A SOME OF THEM THE DATES OF THE CONTAINER,</p> <p>18 WHAT'S WRITTEN ON THE CONTAINER, THE CONSTRUCTION OF THE</p> <p>19 CONTAINER, YES.</p> <p>20 Q AND WHAT THREE DIFFERENT MINES ARE REPRESENTED</p> <p>21 BY THE DIFFERENT SAMPLES THAT YOU'VE STUDIED?</p> <p>22 A THE ITALIAN MINE, THE VERMONT MINE, AND THE</p> <p>23 CHINA MINE.</p> <p>24 Q ALL RIGHT. AND FOR THE ITALIAN MINE,</p> <p>25 GENERALLY SPEAKING, WHEN WAS THAT, THE ITALIAN TALC</p> <p>26 USED?</p> <p>27 A PRIMARILY FROM ABOUT 1942 OR 1943 TO</p> <p>28 APPROXIMATELY 1968 OR '69 WOULD BE ITALIAN FOR JOHNSON &</p>	<p>1 SOMETIME, 2009, 2010, I THINK.</p> <p>2 Q ALL RIGHT. DID THEY -- HERE'S MY QUESTION.</p> <p>3 DID THEY CONTINUE UTILIZING THE SAME SOURCE MINE FOR THE</p> <p>4 VALIANT AS THEY WERE USING WHEN IT WAS J & J?</p> <p>5 A YES. THE CHINA MINES.</p> <p>6 Q AND THEN DID YOU ALSO LOOK AT JOANNE</p> <p>7 ANDERSON'S SAMPLES, THE TWO 1 1/2 OUNCE BOTTLES?</p> <p>8 A I DID.</p> <p>9 Q I WANT TO ASK YOU, WHAT ARE WE LOOKING AT</p> <p>10 HERE.</p> <p>11 MR. BAILEY: YOUR HONOR, I WANT TO MAKE AN</p> <p>12 OBJECTION.</p> <p>13 THE COURT: APPROACH SIDEBAR.</p> <p>14</p> <p>15 (THE FOLLOWING DISCUSSION WAS HELD AT</p> <p>16 SIDEBAR OUTSIDE THE PRESENCE OF THE JURY:)</p> <p>17</p> <p>18 MR. BAILEY: YOUR HONOR, I THOUGHT WE WERE</p> <p>19 PRETTY CLEAR ON HOW WE WERE GOING TO HANDLE THE PENDING</p> <p>20 MOTION IN LIMINE IN THAT HE WAS GOING TO APPROACH BEFORE</p> <p>21 WE GOT INTO ANY OF THE PRODUCTS THAT ARE SUBJECT OF THE</p> <p>22 MOTION.</p> <p>23 NOW WE'RE GETTING INTO CONTAINERS AND STARTING</p> <p>24 TO DISCUSS WHETHER THEY CAN BE OPENED OR NOT, AND WE'RE</p> <p>25 JUST INCHING RIGHT PAST THE MOTION IN LIMINE. I DID GET</p> <p>26 A RECORD ON THAT.</p> <p>27 MR. PANATIER: I SAID THAT I WOULD STOP BEFORE</p> <p>28 WE GOT TO THE RESULTS, AND I WOULD LAY ALL OF THE</p>

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17 (Pages 1747 to 1750)

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<p>1 FOUNDATION FOR DR. LONGO, FOR WHY HE RELIED ON THESE AS 2 RELIABLE RESULTS. 3 THE COURT: I DON'T HAVE AN ISSUE WITH HOW 4 IT'S BEING HANDLED BY MR. PANATIER AT THIS POINT. MY 5 ISSUE IS FOR COUNSEL TO APPROACH BEFORE YOU GET TO ANY 6 OF THE RESULTS AND, HOWEVER, YOU CAN CONTINUE TO OBJECT 7 ANYTIME YOU THINK THAT YOU NEED TO. SO AT THIS POINT 8 I'M GOING TO ALLOW COUNSEL TO PROCEED. 9 JUST MAKE SURE YOU DON'T GET INTO ANY RESULTS, 10 ANY ANALYSIS OR THINGS OF THAT SORT. YOU CAN JUST LAY 11 THE FOUNDATION ABOUT WHAT HE LOOKED AT AND CONTAINERS, 12 THINGS OF THAT SORT. 13 MR. PANATIER: OKAY. 14 MR. BAILEY: YOUR HONOR, MAY I DO THIS. MAY I 15 HAVE A RUNNING OBJECTION TO ANYTHING RELATING TO ANY OF 16 THE CONTAINERS OTHER THAN THE ANDERSON CONTAINERS JUST 17 SO I DON'T HAVE TO KEEP STANDING UP? 18 THE COURT: SURE. 19 MR. PANATIER: I'LL STIPULATE TO THE OBJECTION 20 IS PRESERVED. 21 THE COURT: OKAY. 22 23 (END OF SIDEBAR DISCUSSION.) 24 25 THE COURT: BEFORE WE PROCEED, IS THERE A 26 QUESTION? 27 JUROR: OH, I STOOD UP, YOUR HONOR. MY 28 APOLOGY IF IT'S AGAINST THE RULES. I JUST COULDN'T READ</p>	<p>1 THIS JOHNSON'S BABY POWDER SAYS "BORATED TALCUM POWDER." 2 WE KNOW THAT IS PRE-1942. AND IT WAS EMPTY. WHAT'S 3 INTERESTING HERE IS HOW THE CORNERS OF THE CANS ARE ALL 4 BENT IN. 5 Q OKAY. AND WHAT'S INTERESTING ABOUT THAT? 6 A THE ONLY WAY YOU CAN GET THESE -- THE TOPS OFF 7 ON THESE METAL CANS IS YOU HAVE TO DEFORM THE CAN 8 BECAUSE OF THE TIGHT SEAL THAT'S ON THERE BECAUSE THESE 9 CONTAINERS ARE DESIGNED TO BE TAMPERPROOF. 10 Q AND DO YOU KNOW BASED ON LOOKING AT JOHNSON & 11 JOHNSON DOCUMENTATION THAT THEY ARE DESIGNED TO BE 12 TAMPERPROOF? 13 A YES. IF YOU THINK ABOUT IT, IT MAKES SENSE. 14 YOU DON'T WANT SOMEBODY TURNING ONE OVER, ESPECIALLY IF 15 YOU HAVE AN INFANT OR SOMEBODY THAT'S HOLDING IT WHILE 16 YOU'RE CHANGING THE DIAPER. AND THAT'S SPECIFICALLY WHY 17 THEY DID THIS SO ALL OF A SUDDEN YOU DON'T GET 10-OUNCES 18 OF TALCUM POWDER INTO THE FACE. SO THEY DESIGN IT 19 SPECIFICALLY, YOU CAN'T GET THEM OFF. 20 AND YOU CAN'T -- WE'VE TRIED JUST BY HAND 21 PRESSURE. WE GOT THE STRONGEST GUY WE HAD, AND OF 22 COURSE HE WAS GOING TO SHOW US, AND HE ACTUALLY CUT HIS 23 HAND ON THE PLASTIC. YOU HAVE TO DEFORM THE CANS TO GET 24 THE CONTAINER OPEN. 25 Q OKAY. AND JUST GOING BACK UP TO THIS, IT 26 LOOKS LIKE THERE WERE A NUMBER OF THOSE METAL CANS. 27 WHEN YOU TOOK THE SAMPLES OUT OF THOSE TO ACTUALLY DO 28 THE TESTING, IS THAT WHAT HAD TO HAPPEN? YOU HAD TO</p>
Page 1748	Page 1750
<p>1 THE NEXT LINE AFTER JOHNSON TO DESCRIBE THE CONTAINER 2 AND IT SAYS "ANTISEPTIC." 3 THE COURT: YOU CAN PROCEED. 4 BY MR. PANATIER: 5 Q DOES THAT SAY "ANTISEPTIC"? 6 A IT DOES. 7 Q SO OBVIOUSLY YOU'RE LOOKING AT SOME SAMPLES 8 THAT ARE VERY OLD; IS THAT FAIR? 9 A THAT'S FAIR. 10 Q WERE YOU ABLE AS A SCIENTIST TO SATISFY 11 YOURSELF THAT THESE WERE SUFFICIENTLY RELIABLE AND THAT 12 THE POWDER INSIDE WAS SOMETHING YOU COULD SUFFICIENTLY 13 RELY UPON FOR TESTING? 14 A YES. NOT THESE SAMPLES, BUT YES. 15 Q TELL US ABOUT THESE. I WANT TO ASK ABOUT 16 THESE. 17 A THE TOP ARE -- SAYS "ANTISEPTIC BABY POWDER." 18 AND THAT IS PRE-1900. 19 Q OKAY. 20 A BUT IT WAS MANUFACTURED IN 1986. IT WAS A 21 PROMOTION. SO YOU CAN SEE THAT THIS IS A TOP, AND 22 HERE'S WHAT EVERY ONE OF THEM LOOKED LIKE. THIS 23 PROMOTION WAS THAT IT HAD A COUPON IN THERE FOR A BOTTLE 24 OF JOHNSON & JOHNSON BABY POWDER AND THEY WERE GIVING 25 THESE OUT. THESE WERE SENT BY ONE OF MY CLIENTS. 26 Q THIS IS ONE OF THE LAW FIRMS THAT SENT YOU 27 SAMPLES? 28 A YES. THEY SENT ME THREE EMPTY CANS. AND THEN</p>	<p>1 DEFORM THE CANS TO OPEN THEM? 2 A YES AND NO. 3 Q OKAY. WHAT'S THE YES AND WHAT'S THE NO? 4 A NO. WE DID NOT DO THAT BECAUSE WE DIDN'T WANT 5 TO -- WE WANTED TO SHOW THE INTEGRITY OF THE CAN, AND 6 SOMEBODY CAME AND INSPECTED IN THESE TYPES OF 7 SITUATIONS. 8 WHEN JOHNSON & JOHNSON REPRESENTATIVES CAME 9 FOR US TO GIVE THEM SAMPLES THAT THEY COULD TEST, EVERY 10 METAL CAN HAD TO BE DEFORMED TO GET THEM OPENED SO WE 11 COULD GET THE MATERIAL OUT. 12 Q WHEN YOU GUYS DID THE TESTING, DID YOU JUST 13 SHAKE IT OUT? 14 A YES. 15 Q OKAY. SO WERE THERE ANY CANS WHERE YOU WERE 16 JUST ABLE TO POP IT OFF AND GET THE TALC? 17 A NO. YOU COULDN'T DO IT. 18 Q AND FOR ALL OF THE CANS THAT WHEN THE JOHNSON 19 & JOHNSON REPRESENTATIVES CAME TO GET THEIR SAMPLES OF 20 THESE DIFFERENT EXEMPLARS, WERE THEY ALL LOOKING LIKE 21 THAT AT THE BOTTOM? 22 A NO. THIS ONE HAD BEEN EMPTY FOR A LONG TIME. 23 Q OH, I'M SORRY. I MEAN AS FAR AS HOW THE CAN 24 HAD TO BE DEFORMED. 25 A YES. WE REMOVED THE MATERIALS. NOW, WE DON'T 26 HAVE THEM IN THE METAL CANS ANY MORE IN THE SAMPLES. 27 THEY'RE IN ACTUAL SAMPLE JARS, BUT THEY WERE PRESENT 28 WHEN WE DID THAT SO THEY COULD SEE IT BEING OPENED AND</p>

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18 (Pages 1751 to 1754)

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<p>1 WHAT WE HAD TO DO. AND THEN EVEN THE PLASTIC ONES</p> <p>2 SHOWED DAMAGE WHEN YOU OPEN THEM.</p> <p>3 Q AND WE HAVE A PICTURE OF THAT. BUT I JUST</p> <p>4 WANT TO ASK YOU, SO WHEN THESE WERE ACTUALLY OPENED FOR</p> <p>5 THE FIRST TIME, JOHNSON & JOHNSON'S REPRESENTATIVES WERE</p> <p>6 ACTUALLY THERE TO SEE IT?</p> <p>7 A THAT'S CORRECT.</p> <p>8 Q OKAY. SO YOU SAID YOU LOOKED AT THE PLASTIC</p> <p>9 AS WELL TO MAKE SURE THAT IT WASN'T TAMPERED WITH. WHAT</p> <p>10 ARE WE LOOKING AT HERE?</p> <p>11 A WELL, HERE'S ONE OF OUR SAMPLES, NOT THAT WE</p> <p>12 ANALYZED FOR THE REPORTS, BUT THE ONE WE BOUGHT OFF THE</p> <p>13 SHELF. WE TRIED TO FIGURE OUT HOW CAN WE GET THE TOP</p> <p>14 OFF BECAUSE YOU CANNOT TURN AND PULL THEM OFF. AT LEAST</p> <p>15 NONE OF US COULD.</p> <p>16 SO HERE WE HAVE A PICTURE ON THE SIDE, AND</p> <p>17 HERE IS A HIGHER MAGNIFICATION ON ONE OF OUR OPTICAL</p> <p>18 MICROSCOPES. AND IF YOU SEE RIGHT IN THE MIDDLE, YOU</p> <p>19 CAN SEE A DENT. THE PLASTIC IS SUCH THAT WHEN YOU GO</p> <p>20 AND PRY IT OFF, EVERYTHING LEAVES A MARK. AND WE WERE</p> <p>21 ACTUALLY -- IT DAMAGES THE TOP UNDERNEATH WHERE IT CLIPS</p> <p>22 ON. SO WE -- YOU CANNOT GET THESE OFF WITHOUT DOING</p> <p>23 THIS TYPE OF DAMAGE.</p> <p>24 Q SO WHEN YOU -- WHEN YOU LOOKED AT ALL OF</p> <p>25 THESE, DID YOU INSPECT THEM TO MAKE SURE THAT NONE OF</p> <p>26 THEM HAD BEEN PRIED OFF BEFORE?</p> <p>27 A YES.</p> <p>28 Q OKAY. HAD ANY OF THEM BEEN PRIED OFF BEFORE?</p>	<p>1 A CORRECT. BECAUSE OF THE SOFTNESS AND THE SIZE</p> <p>2 OF THE TALC, THEY COULD FIND NO WAY TO GET IT BACK INTO</p> <p>3 THE BOTTLE THROUGH THE HOLES. SO WHAT THEY DID -- NO.</p> <p>4 SO THEIR ONLY WAY TO GET IT BACK IN THE BOTTLE WITHOUT</p> <p>5 DESTROYING THE TOP WAS TO DRILL A HOLE IN THE BOTTOM TO</p> <p>6 BOTH GET IT OUT AND TO PUT IT BACK IN. THE DENSITY OF</p> <p>7 IT IS SO LIGHT BECAUSE OF ITS SIZE, THEY CAME UP WITH</p> <p>8 YOU COULD NOT GET IT BACK INTO THE BOTTLE THROUGH THE</p> <p>9 HOLES.</p> <p>10 Q BUT LET ME ASK YOU, HASN'T JOHNSON & JOHNSON</p> <p>11 SHOWED YOU A YOUTUBE VIDEO OF A LADY REPLACING HER TALC</p> <p>12 THROUGH THE HOLES?</p> <p>13 A THE TURKEY BASTER TECHNIQUE. THAT WAS CLEVER.</p> <p>14 Q IS THERE ANY EVIDENCE THAT YOU'RE AWARE OF</p> <p>15 BASED ON YOUR ANALYSIS THAT THE POWDER ACTUALLY FOUND IN</p> <p>16 THESE, THAT SOMEBODY USED A TURKEY BASTER ON EVERY</p> <p>17 SINGLE ONE OF THESE TO REPLACE IT WITH SOMEBODY ELSE'S</p> <p>18 TALC?</p> <p>19 A NO. THERE IS NO EVIDENCE, AND SOME OF THESE</p> <p>20 ARE FULL. THE TURKEY BASTER TECHNIQUE WON'T WORK ON A</p> <p>21 FULL BOTTLE. YOU HAVE TO BE ABLE TO EXPEL SUFFICIENT</p> <p>22 AIR TO SUCK IT BACK IN THROUGH THE TOP.</p> <p>23 Q AND THESE -- FOR THE MOST PART, DID THESE COME</p> <p>24 FROM DIFFERENT SOURCES?</p> <p>25 A CORRECT.</p> <p>26 Q CAN YOU TELL US WHAT DIFFERENT SOURCES</p> <p>27 GENERALLY THEY CAME FROM?</p> <p>28 A METAL CANS DON'T WORK WITH SQUEEZING THE AIR</p>
Page 1752	Page 1754
<p>1 A THEY HAD NOT.</p> <p>2 Q OKAY. AND FOR ALL OF THE SAMPLES YOU LOOKED</p> <p>3 AT, WERE THE BOTTLES INTACT?</p> <p>4 A YES.</p> <p>5 Q WERE THEY AS YOU WOULD EXPECT TO FIND THEM?</p> <p>6 A YES.</p> <p>7 Q WAS THERE ANYTHING ABOUT THE POWDER INSIDE</p> <p>8 THAT TOLD YOU THIS WAS CONTAMINATED? THIS HAD BEEN</p> <p>9 TAMPERED WITH IN ANY WAY?</p> <p>10 A NO. IT'S -- IN MY OPINION, IT WAS THE</p> <p>11 ORIGINAL POWDER. IN ORDER TO REPLACE THE POWDER,</p> <p>12 ESPECIALLY THE ONES THAT ARE FULL OR IN THE CANS, YOU</p> <p>13 HAVE TO PRY THE TOP OFF.</p> <p>14 NOW, THERE IS A SHAKER. YOU CAN TURN IT. IT</p> <p>15 TURNS AND SORT OF LIKE A SPICE WHERE YOU COULD TURN AND</p> <p>16 SHAKE IT OUT. YOU CAN TURN AND SHAKE IT OUT. BUT THERE</p> <p>17 WAS A PUBLISHED PAPER RECENTLY ADDRESSED THIS ISSUE.</p> <p>18 YOU CAN'T PUT IT BACK IN THROUGH THE HOLES.</p> <p>19 Q SO WHICH PAPER WAS THAT?</p> <p>20 MR. BAILEY: OBJECTION, YOUR HONOR. HEARSAY.</p> <p>21 NO FOUNDATION.</p> <p>22 THE COURT: I'LL SUSTAIN THE OBJECTION.</p> <p>23 WHY DON'T YOU LAY FOUNDATION.</p> <p>24 BY MR. PANATIER:</p> <p>25 Q WHY DON'T WE ASK YOU WHAT YOU LEARN -- WE</p> <p>26 CAN'T QUOTE FROM THE PAPERS.</p> <p>27 WHAT DID YOU LEARN FROM THIS PUBLISHED PAPER?</p> <p>28 THIS WAS THE PIERCE PAPER YOU SAID?</p>	<p>1 OUT. THESE SAMPLES CAME FROM A COLLECTOR, AND THEY ALSO</p> <p>2 CAME FROM LANIER'S MOSTLY. THE MAJORITY OF THEM CAME</p> <p>3 FROM EBAY FROM DIFFERENT AREAS AROUND.</p> <p>4 Q YOU SAID LANIER. IS THAT ONE OF THE LAW</p> <p>5 FIRMS?</p> <p>6 A YEAH. THE LANIER LAW FIRM. ONE OF THEIR</p> <p>7 SAMPLES ACTUALLY CAME FROM A CLIENT.</p> <p>8 AND THEN YOUR SAMPLES CAME FROM EITHER CLIENTS</p> <p>9 OR YOU PURCHASED THEM. WE HAVE A HISTORICAL SAMPLE FROM</p> <p>10 JOHNSON & JOHNSON WHERE THEY SAID IT'S A 1978 JOHNSON &</p> <p>11 JOHNSON, AND THEY SENT IT TO US WITH THE PAPERWORK.</p> <p>12 AND THEN WE HAVE ADDITIONAL -- SOME ADDITIONAL</p> <p>13 SAMPLES FROM YOU, WHAT ACTUALLY CAME FROM THE PLAINTIFF</p> <p>14 IN THIS CASE. SO THAT'S WHERE THEY COME FROM.</p> <p>15 Q ALL RIGHT. NOW, WE HAVE ALL OF THESE</p> <p>16 DIFFERENT SOURCES. WERE YOU ABLE TO SAY OH, BOY, THESE</p> <p>17 ONES FROM THIS LAWYER WERE SOMEHOW DIFFERENT THAN THE</p> <p>18 OTHERS OR THE ONES FROM EBAY WERE SOMEHOW DIFFERENT?</p> <p>19 A NO. THEY WERE ALL THE SAME. WHEN I SAY ALL</p> <p>20 THE SAME, TO JOHNSON & JOHNSON. THE SAME. THE</p> <p>21 MATERIALS WERE THE SAME. THE PARTICLE SIZES WERE THE</p> <p>22 SAME. WE COULDN'T TELL YOU A DIFFERENCE BETWEEN LOOKING</p> <p>23 AT IT AS MATERIAL SCIENTISTS. WE COULDN'T TELL YOU THE</p> <p>24 DIFFERENCE IN THE SUBSTANCE OF THE TALC IN THERE FROM</p> <p>25 ONE BOTTLE TO THE NEXT BECAUSE IT WAS ALL CONSISTENT IN</p> <p>26 SIZE.</p> <p>27 Q SO THAT'S WHAT I WANT TO ASK YOU. SIZE.</p> <p>28 OH, FIRST OF ALL, WHAT IS THIS? AND THEN</p>

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19 (Pages 1755 to 1758)

<p style="text-align: right;">Page 1755</p> <p>1 WE'LL GET TO SIZE.</p> <p>2 A OH, THIS IS A BIOHAZARD HOOD. THIS IS WHERE</p> <p>3 WE WOULD DO A LOT OF WORK WITH THESE TYPES OF SAMPLES</p> <p>4 AND THEY COULD HAVE ASBESTOS IN THEM OR OTHER TOXINS</p> <p>5 THAT CAN BE FILTERED IN THIS TYPE OF APPARATUS.</p> <p>6 Q OKAY. AND WHENEVER YOU ARE HANDLING THESE</p> <p>7 MATERIALS, WERE THEY DONE UNDER A HOOD LIKE THIS?</p> <p>8 A YES, SIR.</p> <p>9 Q WHY IS THAT BEING DONE? WHY IS IT DONE UNDER</p> <p>10 A HOOD?</p> <p>11 A WELL, THE MOST IMPORTANT THING IS NOT TO</p> <p>12 CONTAMINATE THE PERSON USING, HANDLING THE SAMPLE. THE</p> <p>13 SECONDARY THING IS WE DON'T WANT ANY MATERIALS TO GET</p> <p>14 OUT INTO THE LAB AND CAUSE ANY CONTAMINATION.</p> <p>15 Q NOW, ARE YOU CONFIDENT THAT NOTHING FROM YOUR</p> <p>16 OWN LAB CONTAMINATED ANY OF THESE?</p> <p>17 A OH, YEAH.</p> <p>18 Q AND HOW ARE YOU CONFIDENT ABOUT THAT?</p> <p>19 A WELL, WE WOULD HAVE HAD TO SOMEHOW -- WE WOULD</p> <p>20 HAVE HAD TO HAVE TREMOLITE ASBESTOS IN THAT LAB AT SOME</p> <p>21 ASTRONOMICAL CONCENTRATION, SAY A THOUSAND FIBERS PER</p> <p>22 CC. IF SOMEHOW WE HAD IT OPEN AND SOMEHOW IT WORKED ITS</p> <p>23 WAY IN THE HOOD, THAT WOULD BE IMPOSSIBLE. AND</p> <p>24 TREMOLITE, AT LEAST, ASBESTOS IS NOT ROUTINELY FOUND.</p> <p>25 SO IT'S KIND OF RARE, SO THERE'S NO CONTAMINATION FROM</p> <p>26 OUR LABORATORY.</p> <p>27 Q LET ME ASK YOU ABOUT THIS. FROM WHEN THESE</p> <p>28 PRODUCTS WERE MANUFACTURED -- YOU SAID SOME ARE OLDER.</p>	<p style="text-align: right;">Page 1757</p> <p>1 WHO BUY STUFF ON EBAY WOULD GET THESE SAMPLES.</p> <p>2 IT IS VERY IMPROBABLE THAT SOMETHING LIKE THAT</p> <p>3 HAPPENED.</p> <p>4 Q AND FOR, FOR INSTANCE, SO THOSE ARE ALL THE</p> <p>5 STEPS THAT WOULD HAVE TO HAPPEN FOR SOMEONE TO</p> <p>6 INTENTIONALLY TRY TO PUT TREMOLITE ASBESTOS IN ALL OF</p> <p>7 THESE DIFFERENT --</p> <p>8 A WELL, NOT JUST PUT IT IN BUT PUT IT IN THAT --</p> <p>9 SAY IF I FOUND ONE OF THESE SAMPLES THAT HAD 2 PERCENT</p> <p>10 TREMOLITE IN IT, I WOULD BE VERY SUSPICIOUS OF THAT.</p> <p>11 THAT IS SUCH AN OUTLIER OF WHAT WE ARE FINDING IN HERE.</p> <p>12 IT WOULD -- TO ME IT WOULD BE IMPOSSIBLE TO DO THAT.</p> <p>13 Q ALL RIGHT. AND, AGAIN, NOW HAVING HAD --</p> <p>14 THE COURT: IS THIS A GOOD PLACE TO TAKE A</p> <p>15 BREAK?</p> <p>16 MR. PANATIER: YEAH, SURE.</p> <p>17 THE COURT: OKAY. LET'S TAKE A BREAK. WE'LL</p> <p>18 TAKE A 15-MINUTE RECESS. REMEMBER THE ADMONITION. DO</p> <p>19 NOT FORM OR EXPRESS AN OPINION OR DISCUSS THIS MATTER</p> <p>20 WITH ANYONE. LET'S ACTUALLY MAKE IT 14 MINUTES. IT'S</p> <p>21 10:46 ACCORDING TO THE COMPUTER. WE'LL BE BACK AT</p> <p>22 11:00. I HAVE A MEETING AT NOONTIME, SO I HAVE TO LEAVE</p> <p>23 AT 11:45. SO WE'RE GOING TO STOP AT 11:45 TODAY, AND</p> <p>24 THEN WE'RE GOING TO COME BACK AT 1:45 BECAUSE THE</p> <p>25 MEETING IS OFF SITE. SO JUST TO MAKE SURE WE'RE BACK IN</p> <p>26 TIME. SO YOU'RE GOING TO HAVE A TWO-HOUR LUNCH BREAK,</p> <p>27 SO I'LL SEE YOU BACK AT 11:00.</p> <p>28</p>
<p style="text-align: right;">Page 1756</p> <p>1 SOME ARE NEWER.</p> <p>2 AS A SCIENTIST, WHAT WOULD IT TAKE -- WHAT</p> <p>3 WOULD IT TAKE TO ACTUALLY PUT ASBESTOS IN THEM IN THE</p> <p>4 WAY THAT YOU, GOING FORWARD, IN THE WAY THAT YOU HAVE</p> <p>5 DISCOVERED?</p> <p>6 A WELL, FIRST YOU'D HAVE TO GET A SOURCE OF</p> <p>7 FAIRLY RARE ASBESTOS. IT'S NOT A COMMERCIAL ASBESTOS,</p> <p>8 TREMOLITE. SO YOU WOULD HAVE TO KNOW THAT YOU COULD GO</p> <p>9 TO THE NATIONAL INSTITUTES OF STANDARDS AND TECHNOLOGY</p> <p>10 AND BUY THAT KNOWN SAMPLE.</p> <p>11 THEN YOU, OF COURSE -- WE'LL GET PAST THE FACT</p> <p>12 THAT NOW YOU HAVE DETERMINED HOW TO GET THE MATERIAL OUT</p> <p>13 OF THE CONTAINER OR AN EMPTY ONE AND SOMEHOW OPEN IT UP</p> <p>14 SO THAT OUR FORENSIC ENGINEERS AT OUR LABORATORY CAN'T</p> <p>15 TELL.</p> <p>16 THEN YOU WOULD HAVE TO KNOW TO GO GET COSMETIC</p> <p>17 SIZE TALC. SO YOU WOULD HAVE TO HAVE A SOURCE OF TALC,</p> <p>18 I GUESS, OFF THE SHELF. THEN YOU WOULD HAVE TO KNOW ON</p> <p>19 WHAT AMOUNT OF TREMOLITE DO I PUT IN THIS CONTAINER SO</p> <p>20 THAT I GET IT IN THE RANGE THAT IS EXPECTED TO BE FOUND</p> <p>21 THAT OTHERS HAVE FOUND. AND THIS RANGE HAS TO BE</p> <p>22 ANYWHERE FROM MAYBE 2,000THS OF A PERCENT TO A HUNDRED</p> <p>23 THOUSANDTHS OF A PERCENT. YOU HAVE TO DISTRIBUTE IT.</p> <p>24 YOU'D HAVE TO BE ABLE TO THEN, AFTER YOU PUT</p> <p>25 IT IN THERE, MEASURE IT USING AN ANALYTICAL TRANSMISSION</p> <p>26 ELECTRON MICROSCOPE SO THAT YOU COULD VERIFY THAT THIS</p> <p>27 IS IN THIS RANGE. THEN YOU WOULD HAVE TO DETERMINE HOW</p> <p>28 TO DISTRIBUTE IT AROUND THE COUNTRY SO THAT LAW FIRMS</p>	<p style="text-align: right;">Page 1758</p> <p>1 (THE JURORS EXITED THE COURTROOM.)</p> <p>2 (THE FOLLOWING PROCEEDINGS WERE HELD</p> <p>3 OUTSIDE THE PRESENCE OF THE JURY:)</p> <p>4</p> <p>5 THE COURT: WE WILL BE IN RECESS FOR 14</p> <p>6 MINUTES.</p> <p>7</p> <p>8 (RECESS TAKEN.)</p> <p>9</p> <p>10 (THE JURY ENTERED THE COURTROOM.)</p> <p>11 (THE FOLLOWING PROCEEDINGS WERE HELD IN</p> <p>12 OPEN COURT IN THE PRESENCE OF THE JURY:)</p> <p>13</p> <p>14 THE COURT: EVERYONE MAY BE SEATED. WE'LL</p> <p>15 CONTINUE WITH THE JURY TRIAL. ALL PARTIES ARE PRESENT.</p> <p>16 JURORS AND ALTERNATES ARE PRESENT.</p> <p>17 MR. PANATIER, YOU MAY CONTINUE WITH YOUR</p> <p>18 DIRECT EXAMINATION.</p> <p>19 MR. PANATIER: THANK YOU, YOUR HONOR.</p> <p>20 BY MR. PANATIER:</p> <p>21 Q SO A FEW THINGS BEFORE WE MOVE ON AND THEN WE</p> <p>22 CAN DISCUSS SOME OF THESE RESULTS. YOU TALKED ABOUT THE</p> <p>23 PIERCE PAPER, AND I WANT TO MAKE SURE I'M TALKING ABOUT</p> <p>24 THE RIGHT PAPER. THIS WAS "EVALUATION OF THE PRESENCE</p> <p>25 OF ASBESTOS IN COSMETIC TALCUM PRODUCTS."</p> <p>26 IS THIS THE PAPER YOU WERE REFERRING TO WHERE</p> <p>27 THEY HAD THE HISTORICAL SAMPLE, HAD TO DRILL INTO IT?</p> <p>28 A YES.</p>

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20 (Pages 1759 to 1762)

Page 1759	Page 1761
<p>1 Q AND THEN THERE'S THIS ONE, "ASSESSMENT OF 2 HEALTH RISK FROM HISTORICAL USE OF COSMETIC TALCUM 3 POWDER" BY ANDERSON, SHEEHAN, KALMS AND GRIFFIN. THIS 4 IS FROM 2016. HAVE YOU READ AND RELIED UPON THIS? 5 A I'D READ IT. SOME PARTS I THINK ARE 6 AUTHORITATIVE. SOME I DON'T. 7 Q WELL, LET ME ASK YOU THIS: FOR THE 8 PROPOSITION THAT SCIENTISTS, NOT INCLUDING YOURSELF, 9 HAVE LOOKED AT HISTORICAL CONTAINERS OF COSMETIC TALC TO 10 RENDER OPINIONS. 11 A YES. 12 Q SAME QUESTION FOR THIS ONE BY ILGREN, SARTORIO 13 AND HOSKINS, "ANALYSIS OF AN AUTHENTIC HISTORICAL 14 ITALIAN COSMETIC TALC SAMPLE -- FURTHER EVIDENCE FOR 15 LACK OF CANCER RISK." AND HAVE YOU READ THIS? 16 A I HAVE. 17 Q AND THAT'S BY EDWARD ILGREN. DO YOU KNOW WHO 18 THAT IS? 19 A I DON'T THINK I'VE EVER MET HIM, BUT I KNOW 20 HIM. I KNOW HIS WORK. 21 Q WE'RE NOT GOING TO GET SO MUCH INTO HIS WORK, 22 BUT DO YOU RELY UPON THIS FOR THE PROPOSITION THAT OTHER 23 SCIENTISTS LOOK AT THE HISTORICAL CONTAINERS AND DRAW 24 CONCLUSIONS FROM THEM? 25 A YES. 26 Q SO LET'S TALK A LITTLE BIT ABOUT WHAT YOU DID 27 TO FURTHER ENSURE WHAT YOU WERE LOOKING AT WAS WHAT YOU 28 THOUGHT YOU WERE LOOKING AT. THIS IS PARTICLE SIZE</p>	<p>1 SIZE DISTRIBUTION IN THE SAMPLES YOU RECEIVED AND TESTED 2 AND IN THE CONTROL SAMPLE? 3 A YES. THE SEM DOES IT. IT'S AUTOMATED. SO IF 4 YOU SAT THERE AND DID THAT ON EVERY PARTICLE, THAT 5 PROJECT MAY TAKE YOU A YEAR. 6 Q YOU SAID IT WAS AUTOMATED? 7 A RIGHT. WE PUT THE SAMPLE IN AND WE VALIDATED 8 THAT, THESE LITTLE PARTICLES, LITTLE MICROSPHERES THAT 9 WE KNOW THE SIZE OF, TO MAKE SURE IT'S DOING IT 10 CORRECTLY. AND THEN YOU PUT IT IN. THERE'S A SAMPLE. 11 YOU CAN SEE LARGER SIZE AND SMALLER SIZE, AND IT GOES 12 THROUGH RANDOMLY, STOPS, MEASURES IT, AND MOVES ON. 13 Q DID YOU COMPARE THE CONTROL SAMPLE FROM THE 14 OFF-THE-SHELF JOHNSON'S BABY POWDER WITH THE SAMPLES YOU 15 HAD TO SEE IF THE PARTICLE SIZE DISTRIBUTIONS MATCHED? 16 A YEAH. THEY WERE ALL IN THE SAME SIZE RANGE. 17 THIS HISTOGRAM WAS WHAT EVERY ONE OF THEM LOOKED LIKE. 18 SO THEY WERE SUBSTANTIALLY SIMILAR LOOKING AT -- YOU 19 KNOW, THIS IS ALL FROM THE SAME TYPE OF PROCESS. 20 Q OKAY. AND HAVE YOU RELIED UPON PUBLICATIONS 21 THAT HAVE DISCUSSED WHETHER OR NOT PARTICLE SIZE 22 DISTRIBUTIONS FOR DIFFERENT BRANDS ARE DIFFERENT? 23 A YES. 24 Q AND I JUST WANT TO SHOW ONE OF THOSE. THAT'S 25 THIS ONE. IT'S THIS PAPER BY ZAZENSKI, "TALC: 26 OCCURRENCE, CHARACTERIZATION, AND CONSUMER 27 APPLICATIONS." 28 THIS IS THE CALL OUT. "THE PARTICLE SIZE OF</p>
Page 1760	Page 1762
<p>1 DISTRIBUTION. WHAT IS THIS? 2 A THIS IS A HISTOGRAM OF THE SIZE DISTRIBUTION 3 FOR THE SAMPLES THAT WE ANALYZED IN OUR NEW FIELD 4 EMISSION SCANNING ELECTRON MICROSCOPE WHERE THE 5 MICROSCOPE WAS CALIBRATED TO MEASURE EXACTLY THE AVERAGE 6 DIAMETER OR SIZE OF THE PARTICLES. 7 SO WE PREPARE A SAMPLE AND THEN WE HAVE IT 8 ANALYZED IN SIZE -- 5,000 RANDOM PARTICLES FROM EACH OF 9 THESE SAMPLES, AND THEN COMPARE THEIR SIZE. UNDER THE 10 PROPOSITION, IF THESE ARE ALL DIFFERENT, YOU SHOULD HAVE 11 DIFFERENCES THAT YOU CAN TELL IN SIZE. IF THEY COME 12 FROM THE SAME MANUFACTURER USING THE TYPES OF MILLS AND 13 SPECIFICATIONS, THEY SHOULD BE PRETTY CLOSE. 14 Q OKAY. SO IT SAYS PARTICLE SIZE DISTRIBUTION 15 VERSUS CONTROL SAMPLE. SO WHAT WAS THAT? 16 A CONTROL SAMPLE WAS AN OFF-THE-SHELF JOHNSON'S 17 BABY POWDER SAMPLE THAT THERE'S NO DISPUTE WHERE IT CAME 18 FROM. 19 Q ALL RIGHT. AND SO DID YOU COMPARE THAT, THE 20 PARTICLE SIZE DISTRIBUTION FOR THAT VERSUS THE SAMPLES 21 THAT YOU HAD? 22 A YES. 23 Q OKAY. AND IT SAYS HERE, "5,000 PARTICLES 24 MINIMUM ANALYZED PER SAMPLE BY SEM." DOES THAT MEAN IT 25 ACTUALLY MEASURED 5,000 PARTICLES? 26 A SOMEWHERE BETWEEN 5,000 AND 10,000, YES. 27 Q AND SO DID YOU ACTUALLY GO THROUGH THAT 28 EXERCISE OF HAVING THE SEM ANALYZED FOR THE PARTICLE</p>	<p>1 THE TALC RAW MATERIAL USED IN THESE PRODUCTS VARIES 2 WIDELY BY PRODUCT TYPE AND MANUFACTURER"; IS THAT RIGHT? 3 A THAT'S WHAT IT SAYS. 4 Q AND LASTLY, BEFORE WE GET TO THE RESULTS, THIS 5 IS BY DR. RIGLER, QC ANALYSIS. CAN YOU TELL US WHAT 6 THAT IS? 7 A OH, THESE SAMPLES THAT WE ANALYZE THE TALC, WE 8 GO BACK AND REANALYZE THEM BY DIFFERENT ANALYSTS. WE 9 ALSO DO -- AND LOOK AT THE BLANKS SO THAT WHEN ONE 10 ANALYST SAYS THIS IS WHAT WE FOUND, WE QUALITY CONTROL 11 IT TO SEE IF HE IS CONSISTENT WITH EITHER HIS 12 REANALYZING IT. AND WHEN THEY REANALYZE IT, THEY DON'T 13 KNOW THEY'RE REANALYZING THEIR SAMPLE. 14 AND THEN WE'LL DO A REPLICATE WHERE ANOTHER 15 ANALYST -- AND THEN EVEN RE-PREP THE SAMPLE FOR ANOTHER 16 ANALYST. 17 AND ALSO FOR EVERY ONE SET OF THESE SAMPLES WE 18 RAN A PROCESS BLANK BECAUSE WE WANTED TO MAKE SURE 19 NOTHING THAT WE DID ADDED ANY OF THESE ASBESTOS IF IT'S 20 BOUND TO THE SAMPLE. MEANING YOU DO EVERYTHING THE 21 SAME, HEAVY LIQUID, SPIN IT, FILTER IT, BUT YOU DON'T 22 ADD THE TALC. 23 SO YOU MAKE SURE THERE IS NOTHING IN ANY OF 24 THE REAGENTS WE'RE USING, ANY OF THE HANDLING. NOTHING 25 SHOWS THAT -- SO THAT WHAT WE FIND IN THE SAMPLE IS 26 ACTUALLY FROM THE SAMPLE AND SOMEHOW NOT 27 CROSS-CONTAMINATED IN OUR LABORATORY. 28 Q AND SO IS THIS THE QC PROCEDURE THAT YOUR LAB</p>

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21 (Pages 1763 to 1766)

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<p>1 HAS HAD FOR HOW MANY YEARS?</p> <p>2 A SINCE WE STARTED GETTING CERTIFIED. EVEN</p> <p>3 BEFORE THAT.</p> <p>4 Q AND THEN ONE OTHER THING I WANTED TO ASK ABOUT</p> <p>5 IS WE TALKED ABOUT THE FACT THAT IN 1980 THERE WAS A</p> <p>6 BRIEF PERIOD OF TIME WHERE THERE WAS ITALIAN AND THEN</p> <p>7 YOU HAD TESTED A LOT OF THE EARLIER ITALIAN.</p> <p>8 CAN YOU TELL US TO A REASONABLE DEGREE OF</p> <p>9 SCIENTIFIC CERTAINTY IF WE CAN RELY UPON THE EARLIER</p> <p>10 TESTING OF THE ITALIAN BOTTLES THAT YOU HAD FOR</p> <p>11 APPLICATION TO THE 1980 PERIOD?</p> <p>12 A YES. I CAN SAY THAT WITHIN A REASONABLE</p> <p>13 DEGREE OF SCIENTIFIC CERTAINTY, BECAUSE IT'S COMING FROM</p> <p>14 THE SAME MINE. THE MINE DOESN'T CHANGE THAT MUCH. JUST</p> <p>15 THE PROCESS OF HOW THEY DIG IT. SO YOU'RE COMING FROM</p> <p>16 THE SAME SOURCE. SO YOU WOULD EXPECT THE SAME TYPES OF</p> <p>17 CONTAMINATION IN 1980 AS WE HAD PRE-1980.</p> <p>18 Q AND WITHOUT GETTING INTO WHAT THE ACTUAL</p> <p>19 RESULTS WERE YET FOR THE SEVERAL DECADES OF ITALIAN THAT</p> <p>20 YOU HAD BEFORE THE END OF THE 1960S, DID YOU HAVE</p> <p>21 RESULTS THAT WERE CONSISTENT SCIENTIFICALLY DURING THAT</p> <p>22 PERIOD OF TIME EVEN FOR A SEVERAL-DECADE PERIOD?</p> <p>23 A WELL, SOME OF THEM WERE HIGHER, SOME WERE</p> <p>24 LOWER. SOME OF THE SAMPLES WE DIDN'T FIND ANY -- NO</p> <p>25 DETECTABLE ASBESTOS STRUCTURES. SO IT JUST DEPENDS ON</p> <p>26 EACH BOTTLE.</p> <p>27 Q AND AS FOR THE SIZE DISTRIBUTION, WERE THEY</p> <p>28 ALL CONSISTENT?</p>	<p>1 WE CAN ORIENT OURSELVES, OVER ON THE LEFT WE HAVE SAMPLE</p> <p>2 ID NUMBERS. WERE THOSE ID NUMBERS THAT MAS PROVIDED SO</p> <p>3 WE CAN TRACE THESE THROUGH THE TESTING?</p> <p>4 A YES, THAT'S OUR STANDARD PROTOCOL. SO MAS IS</p> <p>5 30 YEARS OLD. THE FIRST MAS NUMBER FROM THE VERY FIRST</p> <p>6 SAMPLE THAT CAME IN WAS M100. SO YOU CAN SEE NOW THAT</p> <p>7 WE HAVE OVER 66,000 SEPARATE PRODUCTS, AND THAT DOESN'T</p> <p>8 MEAN 66,000, BECAUSE YOU CAN HAVE -- YOU CAN HAVE A</p> <p>9 HUNDRED SAMPLES IN ONE.</p> <p>10 SO ANYTIME A SAMPLE COMES IN THE DOOR, WE</p> <p>11 ASSIGN IT A UNIQUE LABORATORY TRACKING NUMBER. SO JUST</p> <p>12 SORT OF TRIVIA. NOW WE'RE OVER 66,000 SAMPLES.</p> <p>13 Q SO LET ME --</p> <p>14 YOUR HONOR, CAN I APPROACH?</p> <p>15 THE COURT: YES.</p> <p>16 BY MR. PANATIER:</p> <p>17 Q SO I THINK WE MIGHT HAVE AN EXAMPLE HERE WHERE</p> <p>18 IT LOOKS LIKE THERE WERE TWO SAMPLES TAKEN OF ONE</p> <p>19 BOTTLE.</p> <p>20 A CORRECT.</p> <p>21 Q IS THAT FAIR?</p> <p>22 A THAT'S FAIR.</p> <p>23 Q AND ON THAT ONE, WHY WERE THERE TWO SAMPLES</p> <p>24 DONE ON THAT ONE?</p> <p>25 A I BELIEVE THAT'S THE HISTORICAL SAMPLE. AND</p> <p>26 TWO SAMPLES WERE TAKEN BECAUSE WHEN JOHNSON & JOHNSON,</p> <p>27 WHAT I CALL PRODUCED THE SAMPLE, THEY PRODUCED A BOTTLE</p> <p>28 THAT THEY SAID WAS 1978. AND THE LABORATORY THAT THEY</p>
Page 1764	Page 1766
<p>1 A YES.</p> <p>2 MR. PANATIER: OKAY. YOUR HONOR, I THINK THE</p> <p>3 NEXT CHAPTER IS THE RESULTS. SHOULD WE APPROACH</p> <p>4 SIDEBAR?</p> <p>5 THE COURT: YES. APPROACH SIDEBAR.</p> <p>6</p> <p>7 (THE FOLLOWING DISCUSSION WAS HELD AT</p> <p>8 SIDEBAR OUTSIDE THE PRESENCE OF THE JURY:)</p> <p>9 THE COURT: I THINK THERE ARE STILL A COUPLE</p> <p>10 QUESTIONS, BUT I THINK THOSE CAN BE HANDLED ON</p> <p>11 CROSS-EXAMINATION. SO I THINK AN ADEQUATE FOUNDATION</p> <p>12 HAS BEEN LAID. I'LL HEAR FROM MR. BAILEY.</p> <p>13 MR. BAILEY: I'LL JUST RENEW MY OBJECTION.</p> <p>14 352. RELEVANCE. NO FOUNDATION.</p> <p>15 THE COURT: I'M GOING TO OVERRULE ON THOSE</p> <p>16 GROUNDS.</p> <p>17</p> <p>18 (END OF SIDEBAR DISCUSSION.)</p> <p>19</p> <p>20 BY MR. PANATIER:</p> <p>21 Q ALL RIGHT. SO, DR. LONGO, LET'S CHAT A LITTLE</p> <p>22 BIT ABOUT THIS. YOU'VE LOOKED AT HOW MANY TOTAL SAMPLES</p> <p>23 UP TO THIS DATE?</p> <p>24 A TO THIS DATE, 36 SAMPLES.</p> <p>25 Q AND OF THOSE 36, HOW MANY WERE POSITIVE FOR</p> <p>26 ASBESTOS?</p> <p>27 A TWENTY OF THEM.</p> <p>28 Q TWENTY OF 36. OKAY. AND OVER ON -- JUST SO</p>	<p>1 CHOSE DIDN'T HAVE CONTAINERS BIG ENOUGH FOR THE SAMPLE</p> <p>2 WE WERE TO RECEIVE. SO THEY PUT IT IN TWO.</p> <p>3 Q SO DID YOU TEST EACH OF THE LITTLE CONTAINERS?</p> <p>4 A YES.</p> <p>5 Q AND THAT'S WHY WE HAVE UNDER "CONCENTRATION"</p> <p>6 NOW -- IT SAYS "CONCENTRATION UP AT THE TOP." CAN YOU</p> <p>7 TELL US WHAT THAT WAS THAT YOU'RE INDICATING?</p> <p>8 A THAT'S HOW MANY ASBESTOS FIBERS. AND I SAY</p> <p>9 FIBERS. WE DID INCLUDE BUNDLES. I THINK HALF OR A</p> <p>10 LITTLE BIT MORE WERE BUNDLES. THAT'S HOW MANY FIBERS OR</p> <p>11 BUNDLES OF ASBESTOS WERE IN EACH GRAM OF MATERIAL THAT</p> <p>12 WE TESTED.</p> <p>13 SO WE TAKE A VERY SMALL -- WE TAKE A SAMPLE</p> <p>14 OUT. WE GO THROUGH THE HEAVY DENSITY LIQUID SEPARATION</p> <p>15 PROCESS. WE THEN TAKE THE SAND IN THE BOTTOM OF THE</p> <p>16 CENTRIFUGE TUBE AND THEN PREPARE IT FOR TRANSMISSION</p> <p>17 ELECTRON MICROSCOPY ANALYSIS.</p> <p>18 THEN WE COUNT IT -- PRESENT HOW MANY ARE</p> <p>19 ASBESTOS. AND THEN TEM, YOU DO EXTRAPOLATION. YOU</p> <p>20 CAN'T ANALYZE 15 MILLION FIBERS.</p> <p>21 Q WELL, THAT'S WHAT I WAS GOING TO ASK YOU.</p> <p>22 WHEN YOU SAY THERE'S -- LET'S PICK ONE. 9,120 FIBERS</p> <p>23 PER GRAM IN 6620306; RIGHT?</p> <p>24 SOMEONE ISN'T SITTING THERE GOING 1, 2, 3, 4,</p> <p>25 ALL THE WAY TO 9,000, ARE THEY?</p> <p>26 A NO. TO ANALYZE 9,000 FIBERS IN THE</p> <p>27 TRANSMISSION ELECTRON MICROSCOPE, WHERE YOU HAVE TO DO</p> <p>28 IT, WHERE YOU IDENTIFY IT, IT MIGHT TAKE YOU SEVEN,</p>

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22 (Pages 1767 to 1770)

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<p>1 EIGHT MONTHS.</p> <p>2 Q SO HOW CAN YOU TAKE A SMALLER SAMPLE AND</p> <p>3 SCIENTIFICALLY SAY WE KNOW TO A REASONABLY DEGREE OF</p> <p>4 SCIENTIFIC CERTAINTY WHAT THE ACTUAL CONCENTRATION IS</p> <p>5 PER GRAM? HOW CAN YOU DO THAT?</p> <p>6 A BECAUSE YOU TAKE A RANDOM SAMPLE OUT OF IT.</p> <p>7 WE'RE NOT ANALYZING A GRAM. WE'RE TYPICALLY -- IN THE</p> <p>8 HEAVY DENSITY SEPARATION, WE'RE USING ABOUT</p> <p>9 25 MILLIGRAMS.</p> <p>10 Q 25 MILLIGRAMS, WOULD THAT BE 25,000THS OF A</p> <p>11 GRAM?</p> <p>12 A YES.</p> <p>13 Q ALL RIGHT. AND THEN YOU'RE ABLE TO TAKE THAT</p> <p>14 RESULT AND SAY THIS IS WHAT THE CONCENTRATION WOULD BE</p> <p>15 FOR A WHOLE GRAM; IS THAT FAIR?</p> <p>16 A THAT'S FAIR.</p> <p>17 Q OKAY.</p> <p>18 A THAT'S HOW ALL TRANSMISSION ELECTRON</p> <p>19 MICROSCOPY WORKS. WHEN YOU TAKE AN AIR SAMPLE FOR</p> <p>20 ASBESTOS IN THE AIR, YOU'RE NOT SAMPLING ALL THE AIR IN</p> <p>21 THIS ROOM. CAN'T DO THAT. YOU TAKE A SAMPLE AND YOU</p> <p>22 MIGHT SAY THIS ROOM HAS APPROXIMATELY 30,000 CUBIC FEET</p> <p>23 OF AIR IN IT. NOW, IF YOU MULTIPLY IT BY 28, THAT WILL</p> <p>24 GIVE YOU HOW MANY LITERS OF AIR.</p> <p>25 SOMEBODY COMING IN HERE AND MAKING A</p> <p>26 DETERMINATION IF THERE'S ASBESTOS IN THE AIR MAY COLLECT</p> <p>27 200 LITERS OF AIR OR A THOUSAND LITERS OF AIR, NOT THE</p> <p>28 MILLION LITERS OF AIR THAT ARE IN THIS ROOM. THAT'S HOW</p>	<p>1 A YES.</p> <p>2 Q AND YOU SAID RICHTERITE WAS SIMILAR TO</p> <p>3 TREMOLITE?</p> <p>4 MR. BAILEY: OBJECTION, YOUR HONOR. LEADING.</p> <p>5 THE COURT: OVERRULED.</p> <p>6 THE WITNESS: YES. IF YOU -- RICHTERITE IS A</p> <p>7 TREMOLITE. IT'S CALLED A SOLID SOLUTION SERIES.</p> <p>8 BY MR. PANATIER:</p> <p>9 Q A SOLID SOLUTION SERIES?</p> <p>10 A YES. WHEN IT'S FORMED, YOU CAN HAVE</p> <p>11 SUBSTITUTIONS OF ELEMENTS. SO YOU CAN HAVE A TREMOLITE</p> <p>12 CHEMISTRY, BUT WHEREVER IT FORMED IN THE GROUND, IF</p> <p>13 THERE'S A LITTLE BIT OF SODIUM OR A LITTLE BIT OF</p> <p>14 POTASSIUM, IT CAN GET INCORPORATED INTO THE FIBER. THEN</p> <p>15 YOU CALL IT RICHTERITE AND WINCHITE.</p> <p>16 THEY'RE TAKING -- IT USED TO ALL BE CALLED</p> <p>17 TREMOLITE. NOW THEY GET A LITTLE BIT MORE SPECIFIC ON</p> <p>18 SOME MINOR CHEMISTRY CHANGES.</p> <p>19 Q AND THEN YOU ALSO HAVE A COLUMN FOR "ASPECT."</p> <p>20 IS THAT THE ASPECT RATIO THAT WE'VE TALKED ABOUT UNDER</p> <p>21 AHERA, WHERE IT SAID YOU HAD TO HAVE AT LEAST 5 TO 1?</p> <p>22 A THIS IS THE AVERAGE.</p> <p>23 Q OKAY.</p> <p>24 A SO THIS TOOK ALL THE FIBERS OR BUNDLES WE</p> <p>25 FOUND AND AVERAGED OUT THE ASPECT RATIO OF IT. SO I</p> <p>26 THINK OUT OF THE 270 FIBERS, I BELIEVE ONE IN THERE IS</p> <p>27 LESS THAN FIVE. IT'S LIKE 4.8.</p> <p>28 Q OKAY. AND SO THAT TELLS US OVER THERE, WERE</p>
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<p>1 IT'S ALL DONE.</p> <p>2 WHEN SOMEBODY DETERMINES THAT YOU HAVE LEAD IN</p> <p>3 THE DRINKING WATER, YOU DON'T MEASURE ALL THE DRINKING</p> <p>4 WATER THAT'S COMING OUT OF THE RESERVOIR. YOU CAN'T DO</p> <p>5 THAT. YOU MEASURE DISCRETE SAMPLES BECAUSE IT'S</p> <p>6 HOMOGENOUS.</p> <p>7 AND THE SAME THING WITH TEM. WE ANALYZE A</p> <p>8 SMALL PORTION AND THEN WE SAY, OKAY, THIS IS WHAT WE</p> <p>9 FOUND. THIS IS HOW MUCH MATERIAL IS ON MY FILTER. AND</p> <p>10 IF I HAVE TEN FIBERS IN 1 MILLIGRAM AND IT CAME OUT OF</p> <p>11 THIS SAMPLE THAT HAS, SAY, 100, 200 GRAMS, THEN YOU</p> <p>12 EXTRAPOLATE BACK WHAT'S IN THAT MATERIAL. THAT'S HOW</p> <p>13 ALL ANALYTICAL CHEMISTRY IS DONE, EVEN MICROSCOPY.</p> <p>14 Q ALL RIGHT. AND THEN LET'S GO OVER TO THE</p> <p>15 FIBER TYPE. GOING BACK TO OUR INITIAL DISCUSSION OVER</p> <p>16 WHAT TYPE OF FIBER WAS THE BLOUNT METHOD SORT OF</p> <p>17 PREFERENTIALLY GEARED TOWARDS, DO THESE FIBER TYPES KIND</p> <p>18 OF BEAR THAT OUT?</p> <p>19 A CORRECT. SOME OF THE ANTHOPHYLLITE WE FOUND</p> <p>20 IS IRON-RICH. I THINK WE MAY HAVE ONE THAT'S LOW IN</p> <p>21 IRON, BUT THE REST OF IT YOU COULD SEE IS EITHER</p> <p>22 TREMOLITE. YOU SEE RICHTERITE. THAT'S ANOTHER FORM OF</p> <p>23 TREMOLITE. IT HAS A LITTLE DIFFERENT CHEMISTRY. AND</p> <p>24 ACTINOLITE AND RICHTERITE AND TREMOLITE. SO THAT'S THE</p> <p>25 MAJORITY OF WHAT WE'RE FINDING BECAUSE IT'S THE HEAVY</p> <p>26 DENSITY METHOD.</p> <p>27 Q OKAY. AND SO UP AT THE TOP THERE'S TWO THAT</p> <p>28 ARE "TREMOLITE/R." IS THAT RICHTERITE?</p>	<p>1 ALL OF THESE COUNTABLE FIBERS UNDER AHERA PROTOCOL --</p> <p>2 THAT'S A FEDERAL LAW?</p> <p>3 A YES. THESE ARE ALL -- EXCEPT FOR THE 4.8 WAS</p> <p>4 A JUDGMENT CALL. BUT EVERY OTHER ONE,</p> <p>5 260-SOME-INDIVIDUAL ASBESTOS FIBERS AND BUNDLES, ALL OF</p> <p>6 THEM WERE GREATER THAN 5-TO-1 ASPECT RATIO, PARALLEL</p> <p>7 SIDES, GREATER THAN 5 MICROMETERS IN LENGTH. ALL MET</p> <p>8 THE DEFINITION OF NOT ONLY OF AHERA BUT THE ASTM</p> <p>9 DEFINITION FOR TEM WHAT A FIBER IS, WHAT THE</p> <p>10 INTERNATIONAL STANDARDS ORGANIZATION DEFINITION OF A</p> <p>11 FIBER ON TEM, THE ASTM DEFINITION STANDARD.</p> <p>12 THEY ALL USE THIS STANDARD FOR TRANSMISSION</p> <p>13 ELECTRON MICROSCOPY. IT'S NOT JUST AHERA. IT'S A</p> <p>14 COMMON METHODOLOGY THAT ALL OF THESE PROTOCOLS USE FOR</p> <p>15 TRANSMISSION ELECTRON MICROSCOPY FOR THESE TYPES OF</p> <p>16 ANALYSIS.</p> <p>17 Q WELL, LET ME ASK YOU. DO ANY OF THESE TEM</p> <p>18 METHODOLOGIES GO INTO OR CARE HOW THE ACTUAL FIBERS GREW</p> <p>19 IN THE GROUND?</p> <p>20 A NO.</p> <p>21 MR. BAILEY: OBJECTION, YOUR HONOR. CALLS FOR</p> <p>22 SPECULATION.</p> <p>23 THE COURT: THE ANSWER WAS NO. I'M GOING TO</p> <p>24 OVERRULE THE OBJECTION. THE ANSWER WILL REMAIN.</p> <p>25 BY MR. PANATIER:</p> <p>26 Q AND, DR. LONGO, I WANT TO ASK YOU IF THIS IS</p> <p>27 ONE OF THE DOCUMENTS YOU HAD REVIEWED LAST SUMMER. THIS</p> <p>28 IS EXHIBIT 577. BUT DO YOU SEE THIS?</p>

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<p>1 A YES.</p> <p>2 Q HAVE YOU REVIEWED THAT DOCUMENT?</p> <p>3 A I HAVE.</p> <p>4 Q OKAY. AND THIS IS JOHNSON & JOHNSON 1977.</p> <p>5 AND THEY DEFINE ASBESTOS, DO THEY NOT?</p> <p>6 A THEY DO.</p> <p>7 Q ASBESTOS IS DEFINED TO BE "THE FIBROUS</p> <p>8 SERPENTINE CHRYSOTILE AND THE FIBROUS FORMS OF THE</p> <p>9 AMPHIBOLE GROUP AS REPRESENTED BY AMOSITE,</p> <p>10 ANTHOPHYLLITE, CROCIDOLITE, TREMOLITE ASBESTOS, AND</p> <p>11 ACTINOLITE."</p> <p>12 A CORRECT.</p> <p>13 Q IS THAT COMPLETELY CONSISTENT WITH THESE TEM</p> <p>14 METHODS?</p> <p>15 A YES. WE'RE DEFINING WHAT IS FIBROUS.</p> <p>16 Q AND, IN FACT, HERE IT SAYS "ASBESTIFORM</p> <p>17 MINERALS," AND THEN IN PARENTHESIS "FIBROUS FORMS."</p> <p>18 YOU'VE REVIEWED THAT?</p> <p>19 A I HAVE.</p> <p>20 Q OKAY. AND IS THAT WHAT THESE TEM METHODS ARE</p> <p>21 CONCERNED WITH LOOKING AT?</p> <p>22 A THEY'RE CONCERNED OF LOOKING AT WHAT IS</p> <p>23 FIBROUS -- WELL, BASED ON THESE HEALTH AND SAFETY</p> <p>24 PROTOCOLS, IT'S WHAT IS FIBROUS. THEY DO NOT REQUIRE</p> <p>25 YOU TO GO BACK AND DETERMINE ANYTHING ABOUT THE MINE, IN</p> <p>26 MY OPINION.</p> <p>27 Q OKAY. ALL RIGHT. AND THEN I'VE JUST LISTED</p> <p>28 THIS SUMMARY OF THE DIFFERENT PROTOCOLS. UNDER ALL OF</p>	<p>1 MINERALS BY TEM"? DO YOU SEE THAT?</p> <p>2 A YES.</p> <p>3 Q AND THIS IS THE ONE YOU'VE REVIEWED?</p> <p>4 A I HAVE.</p> <p>5 Q THIS DATE IS 1995; CORRECT?</p> <p>6 A CORRECT.</p> <p>7 Q AND DOES IT ALSO TELL YOU HOW TO -- WHAT YOUR</p> <p>8 COUNTING PROTOCOL IS?</p> <p>9 A IT DOES.</p> <p>10 Q AND I LEARNED YESTERDAY, I LEARNED TO NEVER</p> <p>11 USE PINK HIGHLIGHTER OVER YELLOW HIGHLIGHT AGAIN,</p> <p>12 BECAUSE IT ACTUALLY MAKES IT DISAPPEAR. SO I'M NOT</p> <p>13 GOING TO DO THAT HERE. BUT DOES IT TELL US WHAT THE</p> <p>14 DEFINITION OF A FIBER IS HERE, ACCORDING TO JOHNSON &</p> <p>15 JOHNSON?</p> <p>16 A IT DOES. THE DEFINITION OF FIBER, ELONGATED</p> <p>17 PARTICLE WITH PARALLEL SIDES WITH AN ASPECT RATIO</p> <p>18 GREATER THAN OR EQUAL TO 3-TO-1.</p> <p>19 Q SO THEY ACTUALLY DEFINE IT -- JOHNSON &</p> <p>20 JOHNSON ACTUALLY DEFINES IT AS EVEN SHORTER THAN THE TEM</p> <p>21 METHODOLOGY YOU USED?</p> <p>22 A YES.</p> <p>23 Q WE'RE GOING TO COME BACK. HAVE YOU STUDIED</p> <p>24 THE LEVEL OF SENSITIVITY OF JOHNSON & JOHNSON'S TEST</p> <p>25 METHOD?</p> <p>26 A I HAVE.</p> <p>27 Q WE'RE GOING TO COME BACK TO THAT RIGHT AT THE</p> <p>28 END. OKAY. SO WERE YOUR RESULTS CONSISTENT WITH ALICE</p>
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<p>1 THESE DIFFERENT PROTOCOLS, OSHA, MSHA, EPA, U.S.</p> <p>2 GEOLOGICAL SURVEY, CALIFORNIA EPA, AND ALL THE TEM</p> <p>3 METHODOLOGIES, ARE THOSE FIBERS YOU FOUND ASBESTOS IN?</p> <p>4 A YES. THOSE ARE THE -- THOSE ARE THE</p> <p>5 DEFINITIONS OF WHAT -- WHEN YOU ANALYZE TO THESE METHODS</p> <p>6 OR THESE ORGANIZATIONS, IT MEETS THESE CRITERIA. YOU</p> <p>7 CALL IT A FIBER OR ASBESTOS.</p> <p>8 Q OKAY. AND UNDER THE DEFINITION, THE COUNTING</p> <p>9 PROTOCOL THEY GAVE YOU FOR EVALUATING HEALTH AND SAFETY,</p> <p>10 ARE THEY ASBESTOS?</p> <p>11 A YES.</p> <p>12 Q AND THEN WE ALREADY DID JOHNSON & JOHNSON'S</p> <p>13 DEFINITION. HAVE YOU REVIEWED JOHNSON & JOHNSON'S</p> <p>14 METHOD TM 7024?</p> <p>15 A I HAVE.</p> <p>16 Q OKAY. AND WHAT IS THAT?</p> <p>17 A THAT IS JOHNSON & JOHNSON'S OWN TRANSMISSION</p> <p>18 ELECTRON MICROSCOPY METHOD FOR THE DETERMINATION OF</p> <p>19 FIBERS IN ASBESTOS IN TALC.</p> <p>20 MR. PANATIER: OKAY. THIS IS EXHIBIT 931.</p> <p>21</p> <p>22 (PLAINTIFFS' EXHIBIT 931 MARKED FOR</p> <p>23 IDENTIFICATION.)</p> <p>24</p> <p>25 BY MR. PANATIER:</p> <p>26 Q WE'RE GOING TO TALK ABOUT THIS A LITTLE BIT</p> <p>27 NOW AND A LITTLE BIT LATER. BUT DO YOU SEE THAT THIS IS</p> <p>28 ENTITLED "ANALYSIS OF POWDERED TALC FOR ASBESTIFORM</p>	<p>1 BLOUNT?</p> <p>2 A YES.</p> <p>3 Q AND WERE YOUR RESULTS CONSISTENT, SIR, WITH --</p> <p>4 AND JUST TO BE CLEAR BEFORE I GET TO THESE POSTERS, I</p> <p>5 HAVE THESE THREE BINDERS HERE OF JOHNSON & JOHNSON</p> <p>6 INTERNAL DOCUMENTATION. HAVE YOU BEEN PROVIDED WITH ALL</p> <p>7 OF THIS?</p> <p>8 A I HAVE.</p> <p>9 Q YOU WERE PROVIDED WITH IT WHEN?</p> <p>10 A OH, LAST YEAR.</p> <p>11 Q AND HAVE YOU REVIEWED IT ALL?</p> <p>12 A A COUPLE TIMES.</p> <p>13 Q ARE YOUR RESULTS CONSISTENT WITH WHAT JOHNSON</p> <p>14 & JOHNSON WAS SEEING INTERNALLY WITH REGARD TO THEIR OWN</p> <p>15 TALC ORE AND THEIR FINAL TALC PRODUCTS?</p> <p>16 A YES. BESIDES THE CHRYSOTILE, WHAT THEY HAVE</p> <p>17 BEEN -- WHAT THEY HAVE BEEN FINDING FOR YEARS AND WHAT</p> <p>18 THEY HAVE BEEN DOCUMENTING FOR YEARS, MY WORK IS REALLY</p> <p>19 QUITE SIMPLE. I'M DOING NOTHING MORE THAN TELLING FOLKS</p> <p>20 WHAT IN MY OPINION JOHNSON & JOHNSON ALREADY KNEW.</p> <p>21 MR. BAILEY: OBJECTION. HIS COMMENTS, MOVE TO</p> <p>22 STRIKE.</p> <p>23 THE COURT: SUSTAINED. I'M GOING TO STRIKE</p> <p>24 THAT LAST QUESTION REGARDING WHAT JOHNSON & JOHNSON</p> <p>25 KNEW. THAT PART IS STRICKEN.</p> <p>26 BY MR. PANATIER:</p> <p>27 Q LET ME JUST ASK YOU, IS WHAT YOU IDENTIFIED</p> <p>28 WHAT JOHNSON & JOHNSON WAS RECORDING INTERNALLY FOR 40</p>

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<p>1 YEARS?</p> <p>2 A YES, SIR.</p> <p>3 Q LET'S JUST LOOK AT THOSE PICTURES SO YOU CAN</p> <p>4 SHOW THE JURY A LITTLE BIT OF WHAT YOU FOUND, AND WE'RE</p> <p>5 NOT GOING TO SIT HERE AND TALK FOREVER ABOUT EACH ONE OF</p> <p>6 THESE. BUT JUST SET US STRAIGHT AS FAR AS WHAT WE'RE</p> <p>7 LOOKING AT.</p> <p>8 A WHAT WE'RE LOOKING AT IS A FIBER THAT MAY OR</p> <p>9 MAY NOT HAVE A COUPLE OF DIFFERENT INDIVIDUAL SMALL</p> <p>10 FIBERS STACKED ON TOP OF THEM.</p> <p>11 DO YOU HAVE A POINTER?</p> <p>12 Q YEAH, I DO, ACTUALLY. THAT ONE RIGHT HERE.</p> <p>13 A SO THIS IS A TRANSMISSION ELECTRON -- OOPS.</p> <p>14 THAT'S NOT --</p> <p>15 Q THERE YOU GO. IT'S THE TOP BUTTON.</p> <p>16 A SO YOU CAN SEE SOME STRUCTURE HERE. SO THIS</p> <p>17 FIBER IS 6 MICRONS LONG AND .3 MICRONS WIDE. HERE WE</p> <p>18 HAVE A TALC PARTICLE THAT'S EITHER LAYING ON TOP OF THE</p> <p>19 OTHER AND THIS IS A TREMOLITE FIBER. SO THIS IS ON TOP</p> <p>20 OF A TEM GRID AND THIS IS A PHOTOGRAPH WE TOOK IN OUR</p> <p>21 MICROSCOPE.</p> <p>22 Q SO HOW BIG IS THAT CAMERA THAT TAKES THESE</p> <p>23 PICTURES THAT BIG? IS IT SUPER TINY? THAT'S A DUMB</p> <p>24 QUESTION. IT'S NOT VERY FUNNY.</p> <p>25 SO LET ME ASK YOU THIS: THIS IS ONE OF THOSE</p> <p>26 EXAMPLES WHERE YOU SAID THERE MIGHT BE MORE THAN ONE</p> <p>27 FIBER PRESENT; IS THAT RIGHT?</p> <p>28 A YES. YOU CAN SEE IT HERE. YOU SEE WHAT</p>	<p>1 KNOCKS THEM OUT. AND THAT'S HOW WE DO THIS</p> <p>2 MICROCHEMISTRY. SO THAT IS FROM THAT ONE FIBER.</p> <p>3 SO WE LOOK AT THESE RATIOS. THE MAGNESIUM,</p> <p>4 THE SILICON, THE CALCIUM, AND YOU'LL GET A LITTLE BIT OF</p> <p>5 IRON OCCASIONALLY. THAT IS THE MATCH FOR TREMOLITE.</p> <p>6 Q NOW, WHAT ABOUT THAT LAST PEAK OVER THERE, THE</p> <p>7 ONE ON THE FAR RIGHT?</p> <p>8 A OH, THE COPPER?</p> <p>9 Q COPPER. WHERE DOES THAT COME FROM?</p> <p>10 A WELL, THERE'S NO SUCH THING AS COPPER</p> <p>11 TREMOLITE. IT SITS ON A COPPER GRID. AND THOSE</p> <p>12 ELECTRONS AND X-RAYS, BECAUSE THE COPPER GRID IS SO</p> <p>13 MASSIVE COMPARED TO THIS, IT KNOCKS X-RAYS OFF THAT. SO</p> <p>14 YOU ALWAYS SEE THAT.</p> <p>15 Q SO THE ACTUAL GRID, THAT LITTLE 10 BY 10 IS</p> <p>16 MADE OF COPPER?</p> <p>17 A WELL, IT'S 3 MILLIMETERS IN DIAMETER, AND IT</p> <p>18 WILL HAVE A HUNDRED LITTLE OPENINGS ON IT. IT'S MADE</p> <p>19 OUT OF COPPER. THEY ETCH IT.</p> <p>20 Q OKAY. ALL RIGHT. LET'S GO TO THE NEXT ONE.</p> <p>21 SINCE YOU'VE GOT CONTROL, WHAT ARE WE LOOKING AT HERE?</p> <p>22 A THIS IS THE ELECTRON DIFFRACTION PATTERN. SO</p> <p>23 IF WE GO BACK, YOU CAN SEE SOME OF THESE KIND OF -- SEE</p> <p>24 HERE YOU SEE, LIKE, THESE LITTLE DARK BANDS.</p> <p>25 Q YES.</p> <p>26 A THAT'S CAUSED BY DEFECTS IN THE CRYSTALS. THE</p> <p>27 CRYSTALS DON'T QUITE LINE UP SO IT CAUSES THE ELECTRONS</p> <p>28 GOING THROUGH TO BE SCATTERED A LITTLE BIT MORE.</p>
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<p>1 DEFINITELY LOOKED LIKE ADDITIONAL STRUCTURES, BUT WE</p> <p>2 WOULD CALL THAT ONE FIBER.</p> <p>3 Q OKAY. ALL RIGHT. GO AHEAD AND CLICK TO THE</p> <p>4 NEXT ONE. THAT SHOULD BE THE RIGHT BUTTON.</p> <p>5 OKAY. NOW, THIS SAYS "EDS EDXA FOR ELEMENTAL</p> <p>6 CHEMISTRY." WE'VE SEEN THESE BEFORE WHEN DR. COMPTON</p> <p>7 WAS HERE. CAN YOU TELL US WHAT WE'RE LOOKING AT HERE?</p> <p>8 A WE'RE LOOKING AT THE MICROCHEMISTRY FOR THAT</p> <p>9 ONE FIBER. SO I'M SURE DR. COMPTON EXPLAINED HOW WE DO</p> <p>10 THAT. SO WE TAKE THE ELECTRON BEAM AND WE FOCUS IT ON</p> <p>11 THAT FIBER. THAT ELECTRON BEAM CAUSES ELECTRONS IN THE</p> <p>12 ELEMENTS THERE -- WE'VE GOT MAGNESIUM, SILICON, CALCIUM,</p> <p>13 IRON -- TO BE EJECTED. SO IT'S POWERFUL ENOUGH TO KNOCK</p> <p>14 AN ELECTRON OUT.</p> <p>15 WHEN THAT HAPPENS, THE ELEMENTS DON'T LIKE</p> <p>16 THAT. SO ANOTHER ELECTRON WILL JUMP UP AND FILL THAT</p> <p>17 SPACE AND THAT GIVES OFF A PULSE OF X-RAY. AND EVERY</p> <p>18 PULSE OF X-RAY HAS A DIFFERENT ENERGY FOR THE ELEMENT.</p> <p>19 AND SO WHEN THOSE PULSES JUMP OFF WHERE YOU'VE GOT</p> <p>20 SILICON PULSES, X-RAY, MAGNESIUM, CALCIUM, AND THEN THE</p> <p>21 COMPUTER HAS, LIKE, HAS ENOUGH BALLS.</p> <p>22 OKAY. HERE COMES A SILICON ONE. HERE COMES A</p> <p>23 CALCIUM ONE. AND IT JUST STARTS BUILDING THESE</p> <p>24 ELEMENTAL TRACES, ALL DUE TO THE ELECTRON-GENERATING</p> <p>25 X-RAYS, BECAUSE IT'S KNOCKING OTHER ELECTRONS OUT OF THE</p> <p>26 ORBITAL SHELLS.</p> <p>27 REMEMBER WAY BACK WHEN, YOU'VE GOT -- YOU'VE</p> <p>28 GOT THE [INAUDIBLE], THE ELECTRONS SPINNING AROUND.</p>	<p>1 SO IT GIVES YOU KIND OF AN IDEA THAT YOU HAVE</p> <p>2 A CRYSTALLINE FIBER WHEN YOU SEE THAT KIND OF STUFF.</p> <p>3 AND THEN THE ELECTRON BEAM GOING THROUGH IT,</p> <p>4 THE CRYSTAL ACTUALLY CAUSES THE ELECTRON BEAM X-RAYS TO</p> <p>5 BE SCATTERED ALONG THE CRYSTALLINE PLANE. SO YOU CAN</p> <p>6 THEN INDEX THIS AND YOU COULD SAY, YES, THAT MATCHES</p> <p>7 WHAT WE WOULD EXPECT FOR TREMOLITE.</p> <p>8 Q ALL RIGHT. SO FOR EVERY FIBER YOU IDENTIFY,</p> <p>9 FOR ALL OF THE SAMPLES THAT YOU LOOKED AT, DID YOU MAKE</p> <p>10 SURE TO ENSURE THROUGH THE CHEMISTRY IN THE CRYSTAL THAT</p> <p>11 THEY WERE WHAT YOU THOUGHT THEY WERE?</p> <p>12 A YES.</p> <p>13 Q OKAY. SO HERE WE'RE LOOKING AT -- WHAT IS</p> <p>14 THAT?</p> <p>15 A THAT'S ANOTHER BUNDLE THAT'S 3 MICROMETERS IN</p> <p>16 LENGTH. IT'S .4 MICROMETERS WIDE. IT PROBABLY IS A</p> <p>17 BUNDLE. YOU CAN LOOK AT THE END. YOU CAN SEE THAT IT'S</p> <p>18 NOT JUST SQUARED OFF AT THE TOP. SO YOU COULD HAVE</p> <p>19 MULTIPLE FIBERS HERE. AND SO, AGAIN, WE SEE SOME TALC.</p> <p>20 THIS KIND OF SCHMUTZ THAT YOU SEE HERE --</p> <p>21 Q THIS STUFF?</p> <p>22 A NO. THIS STUFF OVER HERE.</p> <p>23 Q THAT STUFF.</p> <p>24 A THAT'S ALL FROM THE REPLICA OF THE FILTER. SO</p> <p>25 HOW WE GET THIS FROM THE FILTER INTO THE TEM, YOU HAVE</p> <p>26 TO PUT A CARBON LAYER DOWN BY ARCING IT. THAT IS ONLY A</p> <p>27 HUNDRED ATOMS THICK.</p> <p>28 Q OKAY.</p>

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<p>1 A AND THEN YOU DISSOLVE THE FILTER OUT BEHIND</p> <p>2 IT. YOU LAY THIS ON THE GRID AFTER YOU PUT THAT CARBON</p> <p>3 ON THERE. SO YOU HAVE THE GRID. IT'S GOT HOLES IN IT.</p> <p>4 YOU'VE GOT THE FILTER WITH THE CARBON ON IT, AND YOU</p> <p>5 STICK THAT ON A SOLVENT. WE CALL IT A VACUOUS WASHER.</p> <p>6 SOLVENT COMES UP THROUGH THE FILTER PAPER AND</p> <p>7 SLOWLY DISSOLVES OUT THE FILTER, LEAVES THAT CARBON FILM</p> <p>8 INTACT. THINK OF TAKING SARAN WRAP AND GOING WITH A</p> <p>9 PENCIL AND LIFTING IT UP. I DIDN'T DEVELOP THAT.</p> <p>10 THAT'S IN THE STATE OF PROTOCOL. SOME REALLY SMART</p> <p>11 PEOPLE DID THAT BACK IN THE '50S.</p> <p>12 Q OH, BY THE WAY, '50S -- HOW LONG HAVE</p> <p>13 TRANSMISSION ELECTRON MICROSCOPES BEEN AROUND?</p> <p>14 A THE FIRST ONE WAS SOLD IN 1943, AND I HAPPEN</p> <p>15 TO HAVE A 1950 VINTAGE ONE RESTORED IN MY CONFERENCE</p> <p>16 ROOM.</p> <p>17 Q OKAY. WELL, SINCE YOU BROUGHT IT UP, I THINK</p> <p>18 I HAVE A PICTURE OF IT. LET'S SEE IF I CAN FIND THAT</p> <p>19 PICTURE BECAUSE IT IS PRETTY COOL. OKAY. OKAY. I'LL</p> <p>20 FIND IT AFTER LUNCH.</p> <p>21 SO HERE'S ANOTHER ONE.</p> <p>22 A I THINK THAT'S THE SAME.</p> <p>23 Q OKAY. SORRY.</p> <p>24 A THERE'S ANOTHER ONE. THAT'S ANOTHER SMALLER</p> <p>25 ONE. 3. IT MAY HAVE MULTIPLE FIBERS. YOU CAN SEE AT</p> <p>26 THE END, BUT YOU CAN SEE THAT THE SIDES ARE PARALLEL.</p> <p>27 UP HERE I THINK IS ANOTHER ONE PROBABLY, OR IT'S TALC</p> <p>28 FIBER. AND THEN THIS IS A THICK PIECE OF TALC.</p>	<p>1 THAT'S A CERTAIN AMOUNT OF AREA?</p> <p>2 A CORRECT. THE 3-MILLIMETER GRID HAS A HUNDRED</p> <p>3 OPENINGS IN IT. IT LOOKS LIKE A MINIATURE SCREEN ON A</p> <p>4 WINDOW, AND EACH OF THOSE WINDOWS IS A GRID OPENING. SO</p> <p>5 THE MICROSCOPIST AT A MAGNIFICATION OF 25,000 TIMES HAS</p> <p>6 TO GO LOOK RANDOMLY IN THOSE OPENINGS AND CHARACTERIZE</p> <p>7 EVERYTHING.</p> <p>8 WELL, I'VE GOT TO DILUTE MY SAMPLE WAY OUT.</p> <p>9 INSTEAD OF A HUNDRED, HE MAY HAVE TO ANALYZE 500 GRID</p> <p>10 OPENINGS OR A THOUSAND GRID OPENINGS TO GET THE SAME</p> <p>11 SENSITIVITY, MEANING SENSITIVITY WE HAVE IS ABOUT 8,000</p> <p>12 FIBERS PER GRAM.</p> <p>13 IF YOU DON'T DO THIS HEAVY LIQUID DENSITY</p> <p>14 METHOD AND YOU WERE TO LOOK AT THE SAME AMOUNT OF</p> <p>15 OPENINGS, THEN YOUR SENSITIVITY DECREASES TO IN THE</p> <p>16 MILLIONS OF FIBERS PER GRAM, MEANING I HAVE TO HAVE</p> <p>17 MILLIONS OF FIBERS IN THE TALC IF I DON'T DO THIS OR</p> <p>18 LOOK AT A TON OF OPENINGS IN ORDER TO FIND ONE FIBER.</p> <p>19 Q WHEN YOU TALK ABOUT COUNTING GRID OPENINGS,</p> <p>20 YOU JUST TALKED ABOUT SENSITIVITY. I WANT TO MAKE SURE</p> <p>21 OUR VOCABULARY IS STRAIGHT. WHICH ONE IS BETTER FOR</p> <p>22 IDENTIFYING ASBESTOS, HIGHER SENSITIVITY OR LOWER</p> <p>23 SENSITIVITY?</p> <p>24 A WELL, HIGHER SENSITIVITY MEANS THE OPPOSITE,</p> <p>25 MEANING IF I HAVE ONE -- IF I HAVE AN ANALYTICAL</p> <p>26 SENSITIVITY OF 8,000 FIBERS PER GRAM OF FINDING 1 FIBER,</p> <p>27 THAT'S MY ANALYTICAL SENSITIVITY. IF MY SENSITIVITY</p> <p>28 GETS WORSE AND WORSE, THEN DOING THE EXACT SAME</p>
Page 1780	Page 1782
<p>1 Q THIS RIGHT HERE?</p> <p>2 A NOW, YOU CAN SEE WHAT HAPPENS IF YOU GET</p> <p>3 MULTIPLE PIECES OF TALC ON TOP OF EACH OTHER. YOU CAN'T</p> <p>4 SEE ANYTHING. IN ORDER -- IF YOU DON'T USE THE HEAVY</p> <p>5 DENSITY LIQUID, THESE SAMPLES WOULD HAVE TO HAVE BEEN</p> <p>6 DILUTED VERY HIGH.</p> <p>7 SO INSTEAD OF US NOW BEING ABLE TO LOOK AT A</p> <p>8 HUNDRED GRID OPENINGS, YOU WOULD HAVE TO ANALYZE</p> <p>9 HUNDREDS AND HUNDREDS AND HUNDREDS OF GRID OPENINGS TO</p> <p>10 GET THE SAME SENSITIVITY WE HAVE.</p> <p>11 Q BECAUSE YOU WOULDN'T BE USING A METHOD WHERE</p> <p>12 YOU PULL THE TALC OUT. YOU'D HAVE TO DILUTE IT?</p> <p>13 A RIGHT.</p> <p>14 MR. BAILEY: OBJECTION, YOUR HONOR. LEADING.</p> <p>15 THE COURT: SUSTAINED.</p> <p>16 BY MR. PANATIER:</p> <p>17 Q WOULD YOU HAVE TO DILUTE IT WITH THE OTHER</p> <p>18 METHOD?</p> <p>19 A YEAH. THINK OF A BOWL OF SPAGHETTI. YOU WANT</p> <p>20 TO COUNT THE SPAGHETTI IN THERE. YOU CAN'T COUNT IT IN</p> <p>21 THE BOWL. YOU HAVE TO SPREAD IT OUT SO THAT YOU CAN</p> <p>22 COUNT EACH ONE. I DON'T DO THE HEAVY DENSITY LIQUID</p> <p>23 SEPARATION METHOD. I HAVE THIS PROBLEM. SO I HAVE TO</p> <p>24 DILUTE IT OUT, WHICH THEN CAUSES ME -- I HAVE TO LOOK AT</p> <p>25 MORE AND MORE AND MORE AREA TO FILTER TO GET ANY TYPE OF</p> <p>26 SENSITIVITY.</p> <p>27 Q AND WHEN YOU TALK ABOUT COUNTING GRID</p> <p>28 OPENINGS, IS THAT JUST A WAY OF SAYING COUNTING --</p>	<p>1 ANALYSIS, BUT I DON'T DO THE HEAVY LIQUID DENSITY</p> <p>2 SEPARATION, 100 OPENINGS, MY SENSITIVITY DROPS FROM</p> <p>3 8,000 FIBERS PER GRAM TO, SAY, FOR A HUNDRED OPENINGS,</p> <p>4 SAY A MILLION FIBERS PER GRAM. THAT MEANS THERE HAS TO</p> <p>5 BE AT LEAST A MILLION FIBERS PER GRAM IN THE TALC BEFORE</p> <p>6 I HAVE THE STATISTICS OF FINDING ONE FIBER.</p> <p>7 Q SO THE LOWER THE SENSITIVITY, THE BETTER?</p> <p>8 A CORRECT.</p> <p>9 Q OKAY. ALL RIGHT.</p> <p>10 A WELL, THE HIGHER THE SENSITIVITY THE BETTER.</p> <p>11 IT'S OPPOSITE. YOU COULD USE IT EITHER WAY.</p> <p>12 Q AND SO HERE, THIS ONE, WHAT'S THAT THING --</p> <p>13 THAT BIG BLACK THING OVER ON THE LEFT THERE, THE BIG</p> <p>14 DARK PIECE THERE?</p> <p>15 A THAT'S THE TEM GRID. WE'RE AT A MAGNIFICATION</p> <p>16 HERE OF PROBABLY 15,000 TIMES. SO THE PROBLEM YOU HAVE</p> <p>17 IS YOU HAVE THESE -- THAT'S A BIG BUNDLE. THAT'S 16</p> <p>18 MICROMETERS IN LENGTH AND IT'S 2 MICROMETERS WIDE, AND</p> <p>19 YOU CAN SEE MULTIPLE FIBERS AT THE END.</p> <p>20 BUT THE GRID HAS THE METAL PART AROUND THE</p> <p>21 HOLES, LIKE A SCREEN. SO THE ASBESTOS FIBER BUNDLE HERE</p> <p>22 IS LYING ON TOP OF THE GRID. WE CAN'T SEE THE WHOLE</p> <p>23 THING.</p> <p>24 Q OKAY. I'M JUST GOING TO PAGE THROUGH A FEW OF</p> <p>25 THESE SO WE CAN LOOK AT THESE. IS THAT A FIBER OR A</p> <p>26 BUNDLE?</p> <p>27 A I THINK EVERYBODY CAN SEE THAT'S A BUNDLE.</p> <p>28 YOU CAN SEE MULTIPLE FIBERS STICKING OUT AND AT BOTH</p>

Trial Day 14 AM Session on May 15, 2018
Anderson, et al. vs. Borg Warner Corporation, et al.

26 (Pages 1783 to 1786)

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1 ENDS. SO THAT'S A BUNDLE.

2 Q OKAY. HERE'S ONE. NOW, HERE THIS ONE, IT'S

3 GOT A RED CIRCLE ON THE BOTTOM. IT SAYS "TALC." NOW,

4 TO BE VERY CLEAR, DID YOU COUNT TALC PARTICLES AS

5 ASBESTOS?

6 A NO.

7 Q ALL RIGHT. SO WHY DID YOU TAKE A PICTURE OF A

8 TALC PARTICLE?

9 A WELL, THIS IS A FIBROUS TALC. FIBROUS TALC IS

10 FOUND IN SOME OF THESE -- IN SAMPLES. AND AGAIN,

11 THEORETICALLY USING THE HEAVY DENSITY, WE SHOULDN'T SEE

12 FIBROUS TALC. WE SHOULDN'T SEE ANY OF THESE TALC

13 PARTICLES, BUT SOME GETS DOWN.

14 BUT WE RECOGNIZE IF WE SEE FIBROUS TALC, TO

15 RECORD IT. WE DON'T COUNT IT BECAUSE FIBROUS TALC

16 DOESN'T JUST FORM BY ITSELF LIKE TALC. IT'S A CHANGE

17 FROM AN ASBESTOS FIBER ANTHOPHYLLITE. IT'S CALLED

18 METAMORPHISM. THIS HAPPENS -- I'M NOT A GEOLOGIST.

19 MR. BAILEY: EXCUSE ME, YOUR HONOR. IT'S

20 BECAUSE OF THAT I OBJECT TO HIM OFFERING ANY TESTIMONY

21 ON EVOLUTION OF MINERALS OR FIBERS OR ANYTHING OF THAT

22 NATURE. LACK OF FOUNDATION.

23 THE COURT: I WILL SUSTAIN.

24 BY MR. PANATIER:

25 Q AGAIN, YOU'RE NOT A GEOLOGIST; RIGHT?

26 MR. BAILEY: AND I WOULD MOVE TO STRIKE THE

27 TESTIMONY.

28 THE WITNESS: NO.

1 WAIT. SO QUARTER TO 2:00.

2

3 (THE JURORS EXITED THE COURTROOM.)

4 (THE FOLLOWING PROCEEDINGS WERE HELD

5 OUTSIDE THE PRESENCE OF THE JURY:)

6

7 THE COURT: OKAY. SO WE'RE OUTSIDE THE

8 PRESENCE OF THE JURORS AND ALTERNATE JURORS.

9 I THINK YOU CAN PROBABLY GET IT IN. YOU JUST

10 NEED TO ASK A FEW MORE QUESTIONS.

11 MR. PANATIER: I WILL, YOUR HONOR.

12

13 (THE AFTERNOON RECESS WAS TAKEN AT

14 11:41 A.M.)

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1 THE COURT: THE COURT WILL STRIKE THE

2 TESTIMONY.

3 BY MR. PANATIER:

4 Q YOU'RE NOT A GEOLOGIST; RIGHT?

5 A I AM NOT.

6 Q THROUGH YOUR 35 YEARS OF DOING THIS, DO YOU

7 HAVE AN APPRECIATION FOR HOW TALC FORMS IN THE EARTH?

8 A YES. IT'S IMPORTANT FOR OUR ANALYSIS IN TALC

9 AND ANTHOPHYLLITE. THAT'S WHY I KNOW ABOUT THIS.

10 Q OKAY. AND DID YOU HAVE TO KNOW ABOUT THAT IN

11 ORDER TO CONDUCT THIS ANALYSIS, SIR?

12 A YES.

13 Q OKAY. ALL RIGHT, SIR. SO CAN YOU JUST TELL

14 US WHY YOU RECORDED FIBROUS TALC?

15 A BECAUSE FIBROUS TALC FORMS FROM ASBESTOS, FROM

16 ANTHOPHYLLITE.

17 MR. BAILEY: SAME OBJECTION, YOUR HONOR.

18 HAVING AN APPRECIATION FOR IT DOESN'T MAKE IT --

19 THE COURT: I'M GOING TO SUSTAIN. I THINK

20 THERE NEEDS TO BE FURTHER FOUNDATION. WHY DON'T WE DO

21 THIS. WHY DON'T WE GO AHEAD AND TAKE OUR NOON RECESS AT

22 THIS POINT.

23 REMEMBER THE ADMONITION NOT TO FORM OR EXPRESS

24 AN OPINION OR DISCUSS THIS MATTER WITH ANYONE UNTIL THE

25 CASE IS SUBMITTED TO YOU FOR DELIBERATION.

26 YOU'RE GOING TO RETURN AT A QUARTER UNTIL

27 2:00. I HAVE AN OFFSITE MEETING THAT I HAVE TO ATTEND,

28 SO JUST TO MAKE SURE I'M BACK. I DON'T WANT YOU TO

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA

2 FOR THE COUNTY OF LOS ANGELES

3 DEPARTMENT 2 HON. GLORIA WHITE-BROWN, JUDGE

4

5 COORDINATED PROCEEDING) JCCP NO. 4674

6 SPECIAL TITLE (RULE 3.550))

7)

8 LAOSD ASBESTOS CASES)

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1 I, DEBORAH MORIN, CSR NO. 11558, OFFICIAL REPORTER

2 PRO TEMPORE OF THE SUPERIOR COURT OF THE STATE OF CALIFORNIA,

3 FOR THE COUNTY OF LOS ANGELES, DO HEREBY CERTIFY THAT THE

4 FOREGOING PAGES, 1689 TO 1785, COMPRISE A FULL, TRUE AND

5 CORRECT TRANSCRIPT OF THE PROCEEDINGS AND TESTIMONY TAKEN IN

6 THE ABOVE-ENTITLED CAUSE ON MAY 15, 2018.

7 DATED THIS 15TH DAY OF MAY, 2018.

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Exhibit 75

Page 1

STATE OF SOUTH CAROLINA) IN THE COURT OF COMMON PLEAS

COUNTY OF DARLINGTON) CASE NO.: 2017-CP-16-0400

ANTOINE BOSTIC, Individually and as
Personal Representative of the Estate of
BERTILA DELORA BOYD-BOSTIC,
Plaintiff,
vs.
3M COMPANY, et al.,
Defendants.

The hearing before the Honorable Jean H. Toal, Judge for Richland County, was taken at Richland County Courthouse, 1701 Main Street, Courtroom 3B, Columbia, South Carolina on Friday, the 11th day of May, 2018, scheduled for 10:00 a.m. and commencing' at the hour of 10:07 a.m. before Barbara S. Ham, Court Reporter and Notary Public in and for the State of South Carolina; pursuant to Rule 30 of the South Carolina Rules of Civil Procedure.

1 APPEARANCES:

2

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16 ALSO PRESENT:

17 Theile B. McVey, Esquire

18 Sarah G. Leblanc

19 Yancey McLeod, Esquire

20 C. Mitchell Brown, Esquire

21 Will Early, Esquire

22 Susan Collings

23 Allyson Twilley, Esquire

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EXHIBIT INDEX

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Exhibits:

Marked at Page

5

[None entered.]

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Court Reporter's note:

24

-- indicates interruption; incomplete phrases; unfinished

25

sentences

1 kinds of things. Is that -- is that reasonable?

2 MR. COOK: Yes, ma'am.

3 THE COURT: All right. It's now twenty minutes of 12. Why
4 don't we take a break until five minutes to 12. Very
5 good.

6 (Off the Record)

7 THE COURT: Give me a moment to rearrange things here. All
8 right. Ladies and gentleman, all right. My proposal
9 would be to take up next Defendants' Motion to Preclude
10 the Testimony of Dr. Longo.

11 MR. COOK: Yes, ma'am. Thank you.

12 THE COURT: All right, sir.

13 MR. COOK: Eric Cook on behalf of Johnson & Johnson and
14 Johnson & Johnson Consumer, Inc., Your Honor.

15 THE COURT: Mr. Cook. Okay.

16 MR. COOK: We have offers that Dr. Longo to support the
17 contention that Defendants' products were contaminated
18 with asbestos. But his made for litigation opinions are
19 built on unreliable evidentiary foundation and cannot
20 survive scrutiny. His opinions should be excluded for
21 three primary reasons, Your Honor. First, he cannot
22 confirm that the products he tested were in their
23 original condition, making it impossible to say with any
24 confidence that they were in the same condition today
25 that they were at the time of sale. Second, his opinions

1 THE COURT: Well, here's -- here's where I see we are in this
2 issue about Dr. Longo. Of course we start with Rule of
3 Evidence 702. All right. Which says you can have an
4 expert if -- all right. They've got specialized
5 knowledge, will assist the prior fact, the witness is
6 qualified by knowledge, skill, experience, training and
7 education. And I have no trouble with finding that Dr.
8 Longo meets those tests. But then we've got to -- the
9 judge is supposed to take a look at the content of the
10 expert testimony, all right. And exercise a gatekeeping
11 responsibility. And we do that, by first of all,
12 deciding whether it's beyond ordinary knowledge and I
13 have no trouble with finding that this kind of material
14 from all these experts is beyond ordinary knowledge. An
15 expert doesn't have to be a specialist but the expert has
16 to acquire the requisite knowledge, schooling,
17 experience. I have no trouble finding that with Dr.
18 Longo. But then you've got to determine whether his
19 information is reliable. And it is the reliability prong
20 that's being attacked by the defense, saying that it's
21 not reliable because it is based on testing of material
22 for which a chain of custody cannot be established. And
23 what I understand you to be saying is this is not an
24 attempt to show the particularity of the physical
25 component in an individual's body, but is intended to

1 show by indirect evidence or by circumstantial evidence
2 the historical -- in part historical material identified
3 as the Defendants' product and what his test done,
4 whenever they were done, indicates. And what he's chosen
5 to do is attack the chain of custody as the foundation of
6 unreliability. What you're saying is it can be evaluated
7 for what it is, but what it is is simply an attempt to
8 take historical material, museum material, and what not
9 and discuss what is found in that historical material
10 from a chemistry and dimensional aspects.

11 MR. FINCH: Material science testing.

12 THE COURT: Material science type thing. Now, all right, I
13 suppose where they are is -- I -- I don't even know if
14 they are really attacking his ability as a material
15 scientist. Or are they just re-asking what he calls
16 asbestos material -- what they call asbestos. He is
17 looking at the old historical material and saying what
18 can you make of this old historical material given the
19 fact that so many other influences could have been
20 brought to bear on what the content is. I don't think
21 he's so much questioning what Dr. Longo says the content
22 is, he is questioning with his labels, but I don't think
23 he's fussing so much in what he says the chemistry and
24 the dimensions are. He just says that's not the whole
25 story of what constitutes asbestos.

1 MR. FINCH: That's what the EPA Ridge Nine and the --

2 THE COURT: Right. Is it all this battle about.

3 MR. FINCH: Asbestiform versus non-asbestiform.

4 THE COURT: I think what he's saying is because the material
5 has been through so many hands before it gets to Dr.

6 Longo, if Dr. Longo is trying to say Johnson & Johnson's
7 current baby powder has asbestos, this is not a fair way
8 of doing it because of the chain of custody problems.

9 MR. FINCH: Okay. Yes, that's --

10 THE COURT: I may -- I may be mis-characterizing --

11 MR. FINCH: No, I think you've got it right -- and may I
12 point, Your Honor, to another rule of evidence that I
13 think answers your concerns.

14 THE COURT: All right.

15 MR. FINCH: Look at rule of evidence 703. Which is very
16 similar to the federal rule although it -- not entirely.
17 If of a type reasonably relied upon by experts in a
18 particular field in forming opinions or inferences upon
19 the subject, the facts or data need not be admissible in
20 evidence. This is saying the facts or data in a
21 particular case upon which an expert bases an opinion or
22 inference may be those perceived by or made known to the
23 expert at or before the hearing. If it's of a type, if
24 it's a type of evidence, a type of thing that an expert
25 in the field reasonably relies upon in forming his or her

1 MR. COOK: Plaintiff is arguing, at least as I understand
2 it, maybe I'm wrong, but they are arguing that the
3 particle size distribution establishes essentially the
4 chain of custody or reliability.

5 THE COURT: It establishes that you haven't got something
6 that's different from what's in the acknowledged Johnson
7 & Johnson product.

8 MR. COOK: What it doesn't establish though is that is in
9 fact Johnson & Johnson because it could be the another
10 brand that matches. That's -- that's the point I'm
11 raising, Your Honor.

12 THE COURT: Okay.

13 MR. COOK: If there's a different cosmetic talc product that
14 matches that, it doesn't establish that somebody didn't
15 refill the bottle at some point. That's all. Thank you,
16 Your Honor.

17 THE COURT: Okay. All right. I am not going to exclude Dr.
18 Longo from testifying, so I deny the motion to exclude
19 Dr. Longo from testifying. But I am going to think a
20 little bit about whether or not to limit Dr. Longo's
21 testimony in any way with respect to his commentary on
22 products that are not products from the Windsor mines.
23 All right. And to me, all of these problems with the
24 chain of custody and reliability are solved. If he is
25 testifying about products from the Windsor mines where

1 the high likelihood is, from the evidence that's been
2 offered, that -- and I believe it's something that both
3 defense experts and Plaintiff's experts agree upon, that
4 the products Ms. Boyd used, the Johnson & Johnson
5 products that Ms. Boyd, used in a preliminary stage where
6 there's enough evidence to survive summary judgment that
7 she used Johnson & Johnson products that the high
8 likelihood, or the overwhelming likelihood is that the
9 products she used came from the Windsor mine in the time
10 period from 1987 through 2003. She used some other
11 products too, but the Johnson & Johnson products she
12 used, and she used a lot of it, the high likelihood is
13 that those products came from the Windsor mines. In
14 terms of Dr Longo's conclusion that those products, the
15 ones from the Windsor mine, had asbestos in them, I am
16 not going to preclude his testimony about that. But to
17 the extent that he talks about the presence or absence of
18 asbestos in products not from the time period are not
19 from the Windsor mines. My current ruling is that he
20 cannot talk about those other products and those products
21 from outside the time period we're talking about and
22 outside the Windsor mine as the source. Now, all right.
23 How to separate out his general conversation or
24 discussion as an expert about how he conducted his
25 analysis and how Blunt and some of the others conducted

1 their analysis, I'm not making any limitation about that.
2 Experts on both sides of this thing have relied on the
3 same stuff he relies upon. But to try to be careful
4 about the witness who is going to be here to say based on
5 all of my background and experience and analysis. My
6 analysis of the products from this particular time and
7 this particular mine indicates that they contained
8 asbestos. I'm going to limit him to making that
9 conclusion on the basis of products from the Windsor mine
10 in the time period regarding '87 to 2003.

11 MR. SWETT: Your Honor, just one point if I may for
12 clarification. Based on your ruling, the -- he tested
13 samples prior to '87 that came from Windsor mine, the
14 same mine. You know --

15 THE COURT: Right.

16 MR. SWETT: Vermont was the source from '68 to 2003 and I
17 think that only encompasses maybe one other sample like
18 from '78. I mean would he be able to talk about that
19 sample as well?

20 THE COURT: That '78 sample is a museum sample, I don't know
21 enough about it as I'm sitting here to -- to say how he got
22 it or where he got it or whether there's some defect in the
23 chain of custody. So, I mean if it came out of the J&J
24 museum, which is what I assume is the case, then I'm not
25 going to exclude it because J&J would have had it for all

1 that period of time. Anything that came from J&J, I don't
2 care what time frame it is.

3 MR. SWETT: Okay.

4 THE COURT: It's going to be okay. All right. Because they
5 had it and then he had it. But anything that -- other
6 than that, that comes from sources that are not J&J
7 sources or it's -- it maintained the museum and warehouse
8 and historical supplies of its products all kinds and
9 many people have tested them, including Longo. I'm not
10 going to exclude those.

11 MR. SWETT: Okay. Thank you, Your Honor.

12 MR. FINCH: Thank you, Your Honor.

13 THE COURT: All right. We're at 1:30. All right. That
14 deals with Longo. Now, we are certainly going to have
15 mercy on our court reporter and let her have a little
16 lunch. All right. But I want to try to figure out kind
17 of where we are. I thought Longo was my most difficult
18 expert witness. I can't frankly see any -- anything like
19 the problems that were identified in the Longo primary
20 chain of custody problems and these other witnesses. I
21 don't care whether it's the defense that's fussing about
22 it or the Plaintiffs that are fussing about it. There is
23 a big a split of opinion between these two sides as to
24 how you identify the presence of asbestos. And that is
25 the -- that's what the quarrel is about all these other

CERTIFICATE OF REPORTER

I, BARBARA S. HAM, COURT REPORTER AND NOTARY PUBLIC IN
AND FOR THE STATE OF SOUTH CAROLINA AT LARGE, HEREBY
CERTIFY THAT I REPORTED THE HEARING ON FRIDAY, THE 11TH DAY
OF MAY 2018, AND THAT THE FOREGOING 220 PAGES CONSTITUTE A
TRUE AND CORRECT TRANSCRIPTION OF SAID HEARING.

I FURTHER CERTIFY THAT I AM NEITHER ATTORNEY NOR
COUNSEL FOR, NOR RELATED TO OR EMPLOYED BY ANY OF THE
PARTIES CONNECTED WITH THIS ACTION, NOR AM I FINANCIALLY
INTERESTED IN SAID CAUSE.

I FURTHER CERTIFY THAT THE ORIGINAL OF SAID TRANSCRIPT
WAS THEREAFTER SEALED AND DELIVERED TO W. CHRISTOPHER SWETT,
ESQUIRE, MOTLEY RICE LLC, 28 BRIDGESIDE BLVD., MT. PLEASANT,
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IN WITNESS WHEREOF, I HAVE SET MY HAND AND SEAL THIS
17TH DAY OF MAY, 2018.

BARBARA S. HAM, COURT REPORTER

MY COMMISSION EXPIRES APRIL 13, 2026

Exhibit 76

**IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS
STATE OF MISSOURI
The Honorable Rex M. Burlison, Judge**

GAIL LUCILLE INGHAM, ET AL.,)
Plaintiffs,)
vs.) Cause No. 1522-CC10417-01
JOHNSON & JOHNSON, ET AL.,)
Defendants.)

TRIAL TRANSCRIPT
Volume 6A

June 7, 2018

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OFFICIAL COURT REPORTER
CITY OF ST. LOUIS CIRCUIT COURT
TWENTY-SECOND JUDICIAL CIRCUIT
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VOLUME 6A

June 7, 2018

(The following proceedings were had in open court, outside the presence and hearing of the jury:)

THE COURT: Mr. Dubin, you had something.

MR. DUBIN: Mr. Lanier, this morning, handed me three documents that he said he intended to address with the witness today. Two which are Imerys documents. I asked him -- my boxes are still coming over from the hotel, I asked him whether these were on the reliance list for the witness, such that he indicated an intention to offer opinions about them.

As your Honor knows, we had an agreement to produce reliance lists and materials for the witnesses. He hasn't given me an answer yes or no, says that he wouldn't because he didn't think it matters. Obviously, not only do we have objections to the Imerys documents --

THE COURT: Let's see the documents. Is this something that's going to be presented with Dr. Longo?

MR. LANIER: Yes, your Honor. These are documents that --

THE COURT: Hang on a second. Dr. Longo, could I ask you to step out?

THE WITNESS: Yes, your Honor. I was wondering if I should be here.

09:03:25 1 (Dr. Longo exited the courtroom.)

09:03:32 2 THE COURT: Yes, Mr. Lanier.

09:03:37 3 MR. LANIER: Yes. I expect these documents
09:03:38 4 will be talked about in cross-examination with their
09:03:42 5 experts. I would like Dr. Longo to explain what these
09:03:45 6 documents mean so that the jury's already got the benefit of
09:03:49 7 that once I get to their experts and cross-examine. This is
09:03:53 8 reasonable anticipation. It saves me from bringing him back
09:03:55 9 in rebuttal.

09:03:57 10 MR. DUBIN: The whole purpose of the exchange
09:04:00 11 of documents before and reliance list was to know what that
09:04:04 12 witness intends to rely on for his opinions. We're not
09:04:08 13 proffering these documents affirmatively. So, therefore,
09:04:11 14 they are part of what he is now purporting to rely on for
09:04:15 15 his opinions.

09:04:16 16 If that was the case, he produced many, many
09:04:19 17 documents along with his deposition, it would have been a
09:04:21 18 simple matter because we could have inquired about them at
09:04:24 19 his deposition to find out what opinions he was being
09:04:26 20 offered. Those are the rules the parties agreed to, and I
09:04:30 21 think they should be abided by.

09:04:32 22 THE COURT: Are these three documents a
09:04:34 23 surprise to the defendant?

09:04:38 24 MR. DUBIN: Certainly, I did not know that
09:04:39 25 Dr. Longo was going to be offering any opinions about them.

09:04:42 1 THE COURT: Have others testified to these
09:04:44 2 documents?

09:04:45 3 MR. DUBIN: None of our witnesses.

09:04:49 4 MR. LANIER: Your Honor, I will represent
09:04:51 5 those have been used in cases against the other side. We've
09:04:54 6 even used them in depositions in this case with the other
09:04:58 7 side present. Those aren't surprise documents, they're not
09:05:01 8 new opinion documents for this witness. The witness has
09:05:04 9 already offered the opinions that these documents go to
09:05:07 10 support. These aren't surprise documents at all.

09:05:10 11 MR. DUBIN: Again, your Honor, the issue is
09:05:12 12 whether this witness has indicated an intention to offer
09:05:15 13 opinions about those documents. As part of his reliance
09:05:18 14 list such that we would inquire about it at the deposition.
09:05:22 15 You know, again, that's the rules that both sides had agreed
09:05:25 16 to in terms of the reliance list.

09:05:27 17 THE COURT: Are these new opinions that would
09:05:28 18 come out of these documents?

09:05:31 19 MR. LANIER: No, your Honor. One of
09:05:32 20 documents is the document I referenced in opening about how
09:05:35 21 they would tilt the table to get a different read, and I
09:05:38 22 would like for this doctor to explain how tilting the table
09:05:41 23 would affect the read under a TEM microscope. He's
09:05:45 24 testified about the TEM microscope, and what's to be done,
09:05:49 25 what's not to be done.

09:05:51 1 The other document talks about the concentration
09:05:54 2 method, which is -- and what it would show, which is what
09:05:57 3 this doctor does. It's what he's testified to. It's the
09:06:00 4 heart of his opinion. It's just another document of Luzenac
09:06:02 5 and the co-conspirator.

09:06:07 6 MR. DUBIN: Your Honor, I have no problem if
09:06:10 7 he wants to ask the doctor about the scientific concept,
09:06:13 8 well, it's inappropriate to tilt a fiber under a TEM. If
09:06:17 9 you tilt a fiber under TEM, will it give you a different
09:06:22 10 diffraction pattern.

09:06:23 11 And all of the scientific concepts I have
09:06:25 12 absolutely no problem with, but to come in now and try to
09:06:28 13 offer opinions, for example, well, isn't this what, you
09:06:29 14 know, Imerys was thinking, isn't this what Imerys was
09:06:32 15 saying, can you offer an opinion about that?

09:06:36 16 That goes beyond even what he should be doing in
09:06:39 17 the abstract. I have no problem with the scientific
09:06:40 18 concepts, if he wants to talk about these scientific
09:06:43 19 concepts with this witness about something that's not on his
09:06:46 20 reliance list and is not something that he wrote or has any
09:06:48 21 personal knowledge about what was in the minds of these
09:06:51 22 individuals, that's inappropriate anyway.

09:06:53 23 MR. LANIER: I'm not --

09:06:54 24 THE COURT: All right. These can be used for
09:06:57 25 scientific concepts. This witness will not be able to

09:07:00 1 testify about opinions that he has not previously given in
09:07:04 2 deposition, but he can talk to these about scientific
09:07:09 3 concepts.

09:07:10 4 MR. DUBIN: Your Honor, I don't know that the
09:07:11 5 documents themselves should be displayed through this
09:07:14 6 witness if they have a basis to get these documents into
09:07:18 7 evidence. Again, I think he should be able to ask him about
09:07:22 8 TEM and tilting and how the process works. But the reason
09:07:26 9 why he wants to use these documents is supposedly to, I
09:07:29 10 would imagine, bolster the expert's opinion to say oh, look
09:07:32 11 what's Julie Pier's saying here, do you have an opinion
09:07:35 12 about that.

09:07:36 13 THE COURT: Has he been asked that opinion
09:07:38 14 about what Julie said before?

09:07:40 15 MR. LANIER: He has.

09:07:41 16 MR. DUBIN: No.

09:07:42 17 MR. LANIER: Yes and no. It depends on what
09:07:44 18 you mean by that.

09:07:45 19 THE COURT: The ruling is clear. These will
09:07:48 20 be used for scientific. Will not be used to expand his
09:07:51 21 opinion that he hasn't already given on the record.

09:07:56 22 MR. LANIER: Thank you, your Honor.

09:07:56 23 MR. DUBIN: Okay. And in that sense, he has
09:07:58 24 not offered any opinion about any of these documents before.
09:08:01 25 So is he going to be allowed then to narrate what he thinks

09:08:05 1 the document means and says? The document that we object to
09:08:10 2 the admission. Because I would have asked if those were on
09:08:14 3 his reliance list, I would have asked him about them.

09:08:17 4 THE COURT: Anything further?

09:08:18 5 MR. DUBIN: No, your Honor.

09:08:19 6 MR. LANIER: Two matters, your Honor, to make
09:08:21 7 sure that, I think these are both fine to get into but I
09:08:24 8 want to make sure that I'm a little more careful than I was
09:08:28 9 yesterday.

09:08:30 10 The first is, having seen the video of the dust,
09:08:35 11 which is where we ended yesterday, I think it's reasonable
09:08:38 12 that maybe one of the jurors might be thinking, well, gee if
09:08:41 13 it's that dusty everybody's going to get cancer. So I'd
09:08:44 14 like to be able to ask the witness just because you're
09:08:47 15 exposed to something like this.

09:08:49 16 MR. DUBIN: I'm sorry, you're whispering, I
09:08:51 17 can't hear you very well. Can you speak up?

09:08:55 18 MR. LANIER: Yeah, I've got a witness out
09:08:56 19 there, and I don't want to -- if you could approach perhaps?

09:09:00 20 I want to be able to ask him just because you're
09:09:02 21 exposed to something does that automatically mean you get
09:09:06 22 cancer. For example, just because you smoke cigarettes,
09:09:07 23 does everybody who smokes get cancer? Does everybody who
09:09:11 24 has HPV get cancer. That type of stuff. And I want to make
09:09:15 25 sure I don't cross -- I'm not bringing in the acts of big

09:09:19 1 tobacco there.

09:09:20 2 MR. DUBIN: You can't ask him that anyway,
09:09:22 3 he's not a medical doctor. We'll have to cross that bridge
09:09:25 4 when you have a medical doctor on the stand. He has no
09:09:28 5 foundation to talk about the disease, so I will object and
09:09:31 6 voir dire on his qualifications if you're going to try to do
09:09:35 7 that with him.

09:09:37 8 THE COURT: Mr. Dubin's correct. I'm not
09:09:39 9 going to allow a medical causation question to be given to a
09:09:43 10 Ph.D.

09:09:43 11 MR. LANIER: Okay. I didn't mean it as a
09:09:45 12 medical causation question. I was thinking in terms of are
09:09:48 13 there lots of things we get exposed to that don't always
09:09:52 14 cause disease. I guess that's causation. I walked right
09:09:56 15 back into it. I got that, your Honor.

09:09:58 16 The other one I wanted to ask him is, I said
09:10:02 17 yesterday on the videos that I was offering the videos for
09:10:06 18 demonstrative purpose of dustiness and not for dust counts.
09:10:08 19 I was -- one of those experiments was an experiment that did
09:10:13 20 produce the dust counts below the waist.

09:10:16 21 So, for example, the stipulation you read that we
09:10:19 22 had agreed to went to the baby video. No question about
09:10:22 23 that. But Mr. Dubin did get the numbers of the below the
09:10:26 24 waist part of the video, he had a chance to cross-examine
09:10:28 25 the witness on it in deposition.

09:10:31 1 I need those numbers for three -- two to three of
09:10:34 2 my plaintiffs, depending upon which ones Texas law apply to.

09:10:40 3 THE COURT: The stipulation only went to the
09:10:42 4 baby?

09:10:42 5 MR. LANIER: Right. So I wanted to make sure
09:10:43 6 I got into the numbers, but I don't want to cross that line
09:10:47 7 because I thought I had said yesterday that I was only using
09:10:50 8 it for demonstrative purposes. And I can ask the questions
09:10:52 9 apart from the video. Did you take measurements of what
09:10:56 10 exposure would be and what the fiber count would be, I can
09:10:59 11 do it that way.

09:11:00 12 MR. DUBIN: On that, your Honor, I think
09:11:02 13 we've objected in general to the use of that because of the
09:11:04 14 fact we don't think that it's relevant or reliable to this
09:11:09 15 group of Plaintiffs.

09:11:10 16 For example, he selected some highest count bottle
09:11:14 17 that he had that wasn't even during the time period of usage
09:11:19 18 for the plaintiffs. I think we made this motion before, but
09:11:21 19 I'm just making sure that I did. Our motions on Dr. Longo
09:11:26 20 were denied. We understand that ruling.

09:11:29 21 I just want to make sure we object to the
09:11:31 22 introduction of any of this evidence, but -- so that I don't
09:11:34 23 have to get back up earlier to the extent it was covered in
09:11:38 24 the --

09:11:39 25 THE COURT: Okay.

09:11:39 1 MR. DUBIN: But I'm not going to make the
09:11:41 2 argument that the stipulation covered that, I agree it did
09:11:43 3 not.

09:11:43 4 THE COURT: That was the point. The
09:11:45 5 stipulation was to the baby. The opinions on -- or the
09:11:50 6 results of counts, I'll have to hear the variables that this
09:11:54 7 witness used to recreate the experiment, and then when we
09:11:59 8 get those variables out of what he addressed, then you go
09:12:03 9 into the opinion, and I'll see where we are at that time.

09:12:07 10 MR. DUBIN: Okay. That's fine, your Honor.

09:12:10 11 MR. MAGEE: Judge, I may have missed it, but
09:12:12 12 I don't think the exhibit numbers for those two documents
09:12:15 13 were put in the record.

09:12:18 14 THE COURT: I think there's three.

09:12:20 15 MR. MAGEE: Three of them.

09:12:22 16 THE COURT: I'm not -- it's -- one's
09:12:25 17 PLT01202. If that's --

09:12:32 18 MR. LANIER: Yes, that's it, your Honor.

09:12:33 19 THE COURT: Okay. And one is PLT00040. And
09:12:45 20 the third is PLT00073. Anything further this morning? How
09:12:54 21 are we doing upstairs?

09:12:56 22 DEPUTY HUBBARD: We're full. We're ready.

09:12:58 23 THE COURT: Full house. Mr. Dubin, these are
09:13:06 24 yours.

09:13:07 25 MR. DUBIN: Thank you.

09:13:21 1 THE COURT: Counsel, we're going to bring the
09:13:22 2 jury down.

09:13:24 3 (The following proceedings were had in open
09:13:24 4 court:)

09:16:41 5 THE COURT: All right. Please be seated.
09:16:45 6 Welcome back, everyone. Everything going okay upstairs for
09:16:51 7 everyone? Ready to get started?

09:16:55 8 All right. Dr. Longo.

09:17:00 9 MR. LANIER: Yes, your Honor. I think we
09:17:04 10 sent him outside, I'll go get him.

09:17:39 11 THE COURT: All right. Sir, please come
09:17:42 12 forward. You'll need to be re-sworn today, a new day.

09:17:45 13 **WILLIAM E. LONGO, Ph.D.,**
09:17:45 14 having been first duly sworn by the deputy clerk, testified:

09:17:45 15 **DIRECT EXAMINATION CONTINUED**

09:18:02 16 THE COURT: Further inquiry on behalf of
09:18:06 17 Plaintiff, Mr. Lanier.

09:18:07 18 MR. LANIER: Please, your Honor. May it
09:18:08 19 please the Court. Good morning, ladies and gentlemen. Good
09:18:10 20 morning, Counsel and clients.

09:18:11 21 BY MR. LANIER:

09:18:12 22 Q Dr. Longo, what I'd like to do is give you and the
09:18:14 23 Court and the jury an idea of what we need to cover with
09:18:18 24 you, we hopefully can get done pretty close to lunchtime.
09:18:23 25 Okay?

09:18:23 1 A That would be fine, thank you.

09:18:25 2 Q I'm calling this Science Road. This is the road
09:18:25 3 we're going to cover with you. We're going to make a stop
09:18:29 4 at a place I'm calling dusty powder. Then we're going to
09:18:32 5 talk about the rigged tests. Along the way we're going to
09:18:35 6 throw up some terms, I want to be able to write them onto a
09:18:40 7 sheet so I've got them to use back with other witnesses
09:18:43 8 during the trial. We're going to talk about your work on
09:18:45 9 figuring out the plaintiffs' exposure, and then hopefully
09:18:51 10 our road ends at scientific truth.

09:18:53 11 So with that as the road we'll follow this
09:18:55 12 morning, are you ready to go?

09:18:58 13 A I am, thank you.

09:18:59 14 Q All right. First thing I want to do is we'll do
09:19:03 15 that first stop, or just basically discuss the idea of this
09:19:06 16 being Science Road. And so within the framework of that,
09:19:11 17 our stop on Science Road is one where we have discussed who
09:19:15 18 you are and what you do a little bit with the jury
09:19:19 19 yesterday, but this gives you a chance to go into a little
09:19:23 20 more detail, okay?

09:19:24 21 A That would be fine.

09:19:25 22 MR. LANIER: We have your CV, which is, your
09:19:29 23 Honor, was marked as Plaintiffs' Exhibit 8219, we displayed
09:19:35 24 it yesterday, but without going into all of it, I'd like to,
09:19:38 25 your Honor, move it into evidence so that the jury will have

09:19:41 1 it in the back and be able to look at it should they deem it
09:19:45 2 useful. Plaintiffs' 8219, move into evidence.

09:19:49 3 THE COURT: Was received yesterday.

09:19:51 4 MR. LANIER: Okay, thank you, your Honor.

09:19:53 5 Q (By Mr. Lanier) So in this regard, one of the
09:19:56 6 things that was interesting to me is that I discussed with
09:19:58 7 you -- the jury yesterday in openings, some of the different
09:20:01 8 kinds of work you have done. And the work you have done
09:20:05 9 included some pretty diverse folks.

09:20:12 10 A Yes, sir.

09:20:14 11 Q Just so the jury's got a feel. Give us one of the
09:20:16 12 most interesting things you've done.

09:20:20 13 A I guess a couple of them there would be, is the
09:20:23 14 Center for Disease Control, the United States Air Force,.

09:20:28 15 Q Let's pick the Air Force. What did you do for
09:20:30 16 them?

09:20:31 17 A Well, I can't tell you everything I did for them,
09:20:35 18 it's still classified. But what made it interesting is that
09:20:39 19 we were doing a type of microscopic jumper cables to reroute
09:20:47 20 around a particular device. So think about going to do a
09:20:53 21 split off something where you want to put the power off of
09:20:57 22 something and put it to something else, you put a jumper
09:21:00 23 cable on it, but we were doing this in the microscopic
09:21:04 24 world, making it out of platinum so that we could bypass
09:21:07 25 certain parts.

09:21:08 1 Every day they would -- we had our laboratory in
09:21:11 2 Raleigh. Every day a U.S. Air Force jet would land. They
09:21:17 3 would get out of the plane just like in the movies. They
09:21:20 4 had a brief case with a sample in it that was handcuffed
09:21:23 5 with his hand. They had security, they never let that out
09:21:27 6 of their sight. At the end of the day they'd go back to the
09:21:29 7 plane and do it all over again the next day. That probably
09:21:33 8 was the most interesting thing we've done in all our work.

09:21:37 9 Q So you've done work beyond just asbestos over the
09:21:39 10 30 years?

09:21:40 11 A Oh, yes. Semiconductor work, analysis U.S.
09:21:45 12 Treasury, all types of diverse things other than asbestos.

09:21:50 13 Q All right. We don't have a lot of time, but just
09:21:52 14 to give the jury a flavor, you told us the Air Force. What
09:21:58 15 did you do for the U.S. Treasury?

09:22:00 16 A That's what we talked a little bit about yesterday
09:22:00 17 where they wanted to -- when they were coming out with the
09:22:03 18 new twenty-dollar bill where they changed the ink, they
09:22:06 19 changed the paper. They wanted to see how far the inking of
09:22:11 20 the paper penetrated into the paper. It's all about how to
09:22:15 21 deal with forgeries, so they wanted to fully characterize
09:22:18 22 all the new process.

09:22:20 23 Q And did they like give you a bunch of
09:22:22 24 twenty-dollar bills to play with?

09:22:25 25 A No. I was saying that yesterday. They were

09:22:26 1 smarter than we were. It came in the regular mail, and we
09:22:30 2 thought -- we were going there's got to be \$20,000 in here.
09:22:33 3 It was all shredded into little strips.

09:22:37 4 Q All right. With an understanding of that, before
09:22:40 5 I leave Science Road, I guess one other thing is, Mr. Bicks
09:22:44 6 said that we would not bring a geologist, you and I talked
09:22:48 7 about that yesterday. You are not a geologist; is that fair
09:22:52 8 to say?

09:22:52 9 A That's fair to say. I'm a material scientist
09:22:54 10 engineer.

09:22:56 11 Q The jury heard from Dr. Alice Blount yesterday,
09:23:00 12 Ph.D. in geology. But beyond that, you've got a lot of
09:23:05 13 different people who work for you, or work at your company
09:23:08 14 with different specialties; is that right?

09:23:11 15 A That is right.

09:23:12 16 Q And have you prepared a report, a final report in
09:23:16 17 this case?

09:23:18 18 A Yes, sir, I have.

09:23:21 19 Q And your final report, is it the -- entitled,
09:23:28 20 Supplemental Expert Report and Analysis of J&J Baby Powder
09:23:34 21 and Valeant Shower to Shower Talc Products for Amphibole
09:23:39 22 Asbestos, March 11th, 2018?

09:23:42 23 A Yes, sir.

09:23:47 24 MR. LANIER: Your Honor, we would move
09:23:49 25 Plaintiffs' Exhibit 6718, which is that final report, into

09:23:52 1 evidence.

09:23:53 2 MR. DUBIN: Your Honor, I have no objection
09:23:56 3 to this being used for demonstrative purposes, but it's an
09:23:58 4 expert report, it shouldn't go into evidence.

09:24:01 5 THE COURT: All right. We'll receive it for
09:24:03 6 demonstrative purposes. I need a copy of your exhibits.

09:24:08 7 MR. DUBIN: What was the number, Mark?

09:24:11 8 MR. LANIER: It's Plaintiffs' Exhibit 6718.

09:24:14 9 I apologize, your Honor, you need this.

09:24:16 10 THE COURT: I need to see the exhibits that
09:24:18 11 you're -- if that's the only one you have.

09:24:24 12 MR. LANIER: No, I've got more. Monica's got
09:24:31 13 everything.

09:24:32 14 Q (By Mr. Lanier) Okay. So the jury can see what
09:24:36 15 it looks like, it's thick in a notebook. But this is your
09:24:40 16 final report. I assume that means you did drafts as well?

09:24:46 17 A Yes, sir. We did early -- early ones that we put
09:24:50 18 out and then went back and caught a few of the mistakes.

09:24:56 19 Q You checked your homework and you got it in final
09:25:00 20 form for this jury; is that fair?

09:25:02 21 A Yes, sir, we believe so.

09:25:03 22 Q And if the jury has a chance to look through this,
09:25:06 23 or we look through this, have you actually taken pictures of
09:25:10 24 things like -- this is on page 199 that I'm displaying right
09:25:15 25 now?

09:25:15 1 A Yes. That's one of the tremolite asbestos bundles
09:25:19 2 that was found in one of the talc samples. This is a
09:25:23 3 photograph from the transmission electron microscope where
09:25:26 4 we can take pictures of what we see.

09:25:29 5 Q Is that -- that's that microscope that's got the
09:25:33 6 gun that shoots down and --

09:25:35 7 A Yes.

09:25:35 8 Q You described yesterday?

09:25:37 9 A Yes, that's one of them.

09:25:38 10 Q And I'm going to get to our term sheet. I'll go
09:25:44 11 on and off on that as we go along, but you've just used a
09:25:50 12 term that a lot of us may not be familiar with. You said
09:25:53 13 that's a tremolite bundle?

09:25:56 14 A Yes.

09:25:57 15 Q When you talk about something being a bundle, what
09:26:02 16 do you mean?

09:26:05 17 A It means that when we do this analysis, we're
09:26:08 18 seeing two types of asbestos structures, either a single
09:26:13 19 fiber, so it's just fiber by itself, or if we have two or
09:26:18 20 three fibers that are sticking together, we call those
09:26:23 21 bundles.

09:26:24 22 And what happens is in our world when we do these
09:26:28 23 analyses, you can have bundles of fibers, it sort of looks
09:26:34 24 like copper cabling on a conductor, that's how this is all
09:26:39 25 formed in the ground. And way back when these rules were

09:26:43 1 developed, we could all agree as microscopists that it was
09:26:47 2 one bundle. Where it got tricky is when people tried to
09:26:50 3 say, okay, in this bundle there's 25 fibers.

09:26:52 4 Nobody could ever agree on how many fibers, but
09:26:56 5 that's what a bundle. It's multiple fibers. And that's how
09:27:00 6 it's formed in the ground typically, is you get these
09:27:04 7 bundles. And then during the process of manufacturing or
09:27:06 8 milling, these bundles break apart at times and release
09:27:09 9 single fibers.

09:27:10 10 Q Okay. In that regard, the asbestos that you're
09:27:16 11 seeing here, it's called a tremolite kind of asbestos. I
09:27:22 12 made that note here, but is this a bundle?

09:27:26 13 A Yes. You can see how it steps up. Those are
09:27:29 14 different groups of fibers. So that particular fiber is
09:27:37 15 almost 10 micrometers long. In our world, we deal with
09:27:41 16 microns and micrometers, which is one-thousandth of a
09:27:44 17 meter -- excuse me, one-millionth of a meter.

09:27:46 18 So a meter is a little bit bigger than a
09:27:49 19 yardstick. And if you take that yardstick and evenly divide
09:27:54 20 it in 1 million pieces, each one of those would be a
09:27:58 21 micrometer. It's a little bit easier for me because -- I
09:28:02 22 got to get my glasses changed, but if you take your fingers
09:28:06 23 and just put them together where can still see light
09:28:10 24 through, believe it or not, that's 1 millimeter in distance.

09:28:13 25 If you take that millimeter, a little slice where

09:28:16 1 you can see the light, and slice it 1,000 times, that's a
09:28:19 2 micrometer. So this particular case we have a bundle that
09:28:23 3 is almost 10 micrometers in length, it's 9.7. And then the
09:28:28 4 width of it is 1.95 micrometers, but that's not one
09:28:33 5 structure, that's multiple fibers all stacked together.

09:28:37 6 Q Okay. So these are pictures that you took, where
09:28:42 7 did this picture come from?

09:28:44 8 A That came out of sample 65329-041, which was one
09:28:51 9 of the Johnson & Johnson contain -- Johnson & Johnson Baby
09:28:54 10 Powder samples that your law firm sent us.

09:28:59 11 Q And I think the record will indicate we got it off
09:29:04 12 of eBay, or at least that's what we've told you, or is this
09:29:07 13 one of the eBay purchases?

09:29:09 14 A That's what you told us. That's what's on our
09:29:12 15 chain of custody.

09:29:15 16 Q Tremolite. Is this tremolite asbestos?

09:29:17 17 A Yes, sir, it is.

09:29:18 18 Q Is this in an asbestos form as it's called?

09:29:22 19 A Because it is a bundle, by definition that is an
09:29:27 20 asbestiform.

09:29:27 21 Q Okay. And if we wanted to continue to go through
09:29:32 22 this, would we be able to find photograph after photograph
09:29:36 23 of different things that you have taken and substantiate
09:29:40 24 your findings?

09:29:41 25 A Yes.

09:29:42 1 Q So, for example, I've got a page 223.

09:29:50 2 A That would be another bundle. Now, if you look
09:29:53 3 closely at the end, you can see multiple fibers. So you
09:30:04 4 have one fiber, it's touching, you know, you have to look at
09:30:09 5 how the microscopist designated that, but that is another
09:30:12 6 tremolite, either fiber or bundle, depending on how the
09:30:18 7 microscopist interpreted that.

09:30:20 8 Q And this is from that same sample?

09:30:22 9 A Yes, sir.

09:30:23 10 Q All right. Now, in addition to your report that
09:30:29 11 I've marked as Plaintiffs' Exhibit 6718, are there other
09:30:36 12 reports that you've done in this case that will hopefully
09:30:39 13 we'll do in the interest of time?

09:30:41 14 A Yes.

09:30:41 15 Q All right. Great. Then let's go down Science
09:30:46 16 Road, and let's make the next stop at dusty powder. And
09:30:49 17 this is us basically picking up where we were yesterday.
09:30:52 18 Okay.

09:30:53 19 A Yes, sir.

09:30:54 20 Q So, yesterday the jury had the benefit of seeing
09:30:59 21 the video as we were getting ready to end the day.

09:31:04 22 A Yes.

09:31:05 23 Q And we had two different clips out of that video.
09:31:08 24 One of the adult and one of the baby, right?

09:31:12 25 A That is correct.

09:31:15 1 Q Now, I got into that with you by looking at Mr.
09:31:19 2 Bicks' overhead slide number 21. Where he told the jury
09:31:24 3 that talc is in every day products. Do you recall that?

09:31:30 4 A I do.

09:31:33 5 Q Based upon your experience, have you ever seen
09:31:37 6 anyone taking a cancer drug, whether it's got talc in it or
09:31:42 7 not, which I understand you say they don't all have. But
09:31:46 8 have you ever seen one exposed to the kind of dust that you
09:31:50 9 were finding in your experiment with baby powder?

09:31:56 10 A No, not unless you crush that, a lot of those
09:32:00 11 pills up and sprinkled it on yourself. It's a completely
09:32:05 12 different type of exposure route.

09:32:08 13 Q Same for any other type of pill that might have
09:32:10 14 talc in it, should it have it?

09:32:14 15 A No, that wouldn't, in my opinion, would not be
09:32:16 16 what I would call an exposure at all, typically what you
09:32:20 17 would see with just baby powder, talcum powder, where you're
09:32:24 18 sprinkling a very fine powder, which makes it naturally
09:32:28 19 airborne when that happens as you saw on the videos.

09:32:32 20 Q If you did Tyndall lighting and we took the old
09:32:35 21 kind of gum that had this on the inside of the foil, do you
09:32:40 22 think that you would be showing as much dust by chewing a
09:32:46 23 piece of gum?

09:32:47 24 A No.

09:32:48 25 Q Eating something cooked in olive oil or pouring it

09:32:51 1 on your salad?

09:32:53 2 A I don't believe so, no.

09:32:55 3 Q Deodorant, sunblock, soap?

09:32:59 4 A No, those are not dusty products.

09:33:02 5 Q Now, other powder products, perhaps?

09:33:06 6 A Yes. If you're using talcum powder the same way,
09:33:10 7 yes, they're going to be dusty.

09:33:13 8 Q Makeup, perhaps?

09:33:15 9 A Perhaps.

09:33:24 10 Q So we would need to hear testimony whether or not
09:33:27 11 all makeup has talc in it?

09:33:30 12 A That I don't know.

09:33:30 13 Q Okay. None of the makeup you use?

09:33:37 14 A You said you weren't going to bring that up.

09:33:41 15 Q All right.

09:33:42 16 A No, sir.

09:33:49 17 Q Now, you also did a report from your below the
09:33:55 18 waist; is that right?

09:33:57 19 A That is correct.

09:33:59 20 Q And so if we take your video and look at it in
09:34:04 21 detail, when you did that video and the man was standing
09:34:09 22 there and he had the respirator on, the breather, were you
09:34:13 23 able to take measurements of the actual asbestos in the air?

09:34:21 24 A Yes. If you look at that video and looked at it
09:34:26 25 closely, you can see what looked like little black cans

09:34:30 1 sitting up around his head area, shoulder area. And we also
09:34:33 2 have sitting back away from him like a feed in the room, and
09:34:37 3 that was taking an air sample. So during that whole study,
09:34:41 4 I think we let it run for five minutes, a few seconds of
09:34:46 5 applying the powder and then the air samples run for an
09:34:50 6 additional amount of time. Those air filters were
09:34:53 7 collecting the particles in the air.

09:34:55 8 Once we collected those air filters, we took them
09:34:59 9 to the laboratory and analyzed them using standard federal
09:35:03 10 protocols for determining occupational exposures to airborne
09:35:08 11 asbestos fibers.

09:35:10 12 Q Okay. The jury will see, when we get to it later,
09:35:14 13 that you found different concentrations of asbestos in
09:35:20 14 different containers?

09:35:22 15 A Correct.

09:35:24 16 Q Which container and which one did you use when you
09:35:28 17 did this test?

09:35:30 18 A That container was the one that was a post-1953,
09:35:41 19 somewhere '53 to '64, because of the wording on it. And it
09:35:46 20 had a concentration -- it was our highest concentration that
09:35:49 21 we found, which is 15 million asbestos fibers in bundles per
09:35:55 22 gram of Johnson Baby Powder. That was in that bottle.

09:36:01 23 Q 15 million fibers in bundles per gram. So if -- I
09:36:07 24 don't have my little baby powder up here, oh, Juan's got
09:36:12 25 them?

09:36:15 1 MR. WILSON: No, I don't have them.

09:36:26 2 Q (By Mr. Lanier) My gram passed away 20 years ago.
09:36:28 3 What is a gram?

09:36:30 4 A A gram is a unit of measurement, it's the metric
09:36:34 5 system. Give you kind of an idea. An ounce is
09:36:37 6 approximately 28.3 or 4 grams in 1 ounce. So if you have --
09:36:43 7 I think your little bottle was an ounce and a half, if I
09:36:49 8 remember correctly.

09:36:50 9 Q Okay.

09:36:50 10 A So if you have 15 million per gram, and a gram and
09:37:02 11 a half would be approximately, let's see 28, 14, 30, 38, 42
09:37:11 12 grams. So an ounce and a half at that concentration per
09:37:18 13 gram would be approximately 630 million asbestos fibers in
09:37:24 14 bundles.

09:37:25 15 Q In the little bottle?

09:37:27 16 A In the little bottle.

09:37:37 17 Q Now, you said this was your findings. I want to
09:37:43 18 make sure the jury is clear on this so we're not pulling any
09:37:49 19 punches. This was based on what you did worst case
09:37:54 20 scenario. Is that fair to say?

09:37:56 21 A It was our highest concentration. Don't know if
09:37:59 22 it's the worst case scenario because we haven't analyzed
09:38:03 23 everything. You may have higher ones that you can call
09:38:07 24 higher concentration, but then you may have lower
09:38:10 25 concentrations. So it depends on which particular bottle

09:38:13 1 you're using and how much is in it.

09:38:15 2 Q Okay. So I wanted you to have it at an extreme so
09:38:19 3 that we could do some math. So you used the highest that
09:38:22 4 you tested, and here's my question for the jury and the
09:38:25 5 judge and the record.

09:38:26 6 If based upon the highest concentration in that
09:38:31 7 little bottle you've got 630 million asbestos fibers in
09:38:36 8 bundles, if instead you only used a bottle that only had
09:38:42 9 half as much, could you just divide that in half and then
09:38:46 10 say if it's half as much --

09:38:49 11 A Yes.

09:38:49 12 Q -- then it's 315 million in the little bottle?

09:38:54 13 A Correct.

09:38:57 14 Q If it's a tenth as much, is it 63 million?

09:39:03 15 A A tenth of much, yes. You just divide by the
09:39:10 16 number depending upon the concentration.

09:39:12 17 Q Okay. And by the same token, we're now -- you've
09:39:15 18 done this for the little chiquita bottle, the small one,
09:39:21 19 correct?

09:39:21 20 A Yes.

09:39:22 21 Q If instead our ladies were buying the larger
09:39:27 22 bottle, that's the cheaper way to buy it, can you do the
09:39:33 23 math extended out that way with the larger bottle?

09:39:39 24 A I need to ask you a question. Some people call
09:39:42 25 the 14-ounce the larger bottle, but it is the 22-ounce. So

09:39:47 1 which one would you like me to do?

09:39:49 2 Q Let's do both. So if it's a 14-ounce bottle in
09:39:54 3 the bottle itself, and we'll use the highest concentration
09:39:58 4 knowing that we can always do the math to reduce it down.

09:40:02 5 But the highest concentration in a 14-ounce
09:40:05 6 bottle, how many fibers?

09:40:19 7 A 5.9 billion.

09:40:21 8 Q So that's 5.9 billion?

09:40:29 9 A Yes, sir.

09:40:33 10 Q And then -- and that's the 14-ounce bottle.
09:40:37 11 What's the size of the other one you said?

09:40:39 12 A I believe the largest bottle was 22 ounces, if I
09:40:43 13 recall correctly.

09:40:46 14 Q All right. And if it's a 22-ounce bottle, how
09:40:52 15 many fibers, highest concentration, worst case scenario so
09:40:56 16 we can do the math to reduce it down as we want to, but how
09:41:01 17 many fibers in that, asbestos fibers in bundles?

09:41:05 18 A That would come out to 9 billion asbestos
09:41:09 19 structures in a 22-ounce bottle based on the finding of
09:41:13 20 15 million per gram.

09:41:17 21 Q One bottle?

09:41:18 22 A Yes, sir.

09:41:21 23 Q Preview just a moment. Does the testing technique
09:41:28 24 that Johnson & Johnson had used for them, is it able to pick
09:41:34 25 up these many generally?

09:41:39 1 A Generally, because of the size they're using,
09:41:43 2 generally, no.

09:41:45 3 Q Now, do you ever have anything that indicates that
09:41:51 4 people have this many asbestos fibers from chewing a piece
09:41:55 5 of gum or taking a pill, that they inhale into their body or
09:42:01 6 sprinkle around their genitals?

09:42:03 7 A No, that doesn't seem reasonable. I don't know
09:42:09 8 any information that would suggest that.

09:42:11 9 Q All right. We've got -- before we leave dusty
09:42:14 10 powder, we got your below the waist report.

09:42:19 11 MR. LANIER: Your Honor, we've got it marked
09:42:21 12 as Plaintiffs' Exhibit 5862.

09:42:25 13 Q (By Mr. Lanier) Did you do a full report that's
09:42:26 14 got all of this data?

09:42:29 15 A Yes, here it is.

09:42:32 16 Q Thank you.

09:42:34 17 MR. LANIER: We'd offer it into evidence,
09:42:35 18 your Honor, as testing data, not simply a report.

09:42:39 19 MR. DUBIN: Again, your Honor, I have no
09:42:41 20 objection to it being used for demonstrative purposes, but
09:42:43 21 it shouldn't be admitted into evidence.

09:42:46 22 THE COURT: Will be received for that
09:42:47 23 purpose.

09:42:48 24 MR. LANIER: Thank you, your Honor.

09:42:49 25 Q (By Mr. Lanier) Okay. Let's move down the road.

09:42:51 1 Dusty powder. I want to talk now about rigged tests. Okay?

09:43:01 2 A Okay.

09:43:02 3 Q Have you had a chance to look at a number of the
09:43:07 4 tests done by Johnson & Johnson or their surrogates?

09:43:14 5 MR. DUBIN: I'm going to object to the
09:43:16 6 surrogate portion of that question. That's argument. Lacks
09:43:20 7 foundation.

09:43:21 8 THE COURT: As to the word?

09:43:23 9 MR. DUBIN: Yes.

09:43:24 10 THE COURT: Sustained. Please choose another
09:43:26 11 word.

09:43:28 12 Q (By Mr. Lanier) By themselves or by the folks they
09:43:30 13 paid to do the work?

09:43:33 14 A I've looked at their testing protocols or recipes,
09:43:37 15 and then what their consulting labs that they hired to do
09:43:44 16 their test, what their recipes were and how it fit with what
09:43:48 17 we did.

09:43:49 18 Q All right. Let's make a stop here and let's
09:43:51 19 discuss these tests, please. In this regard, let's start
09:43:59 20 out with just some simple things.

09:44:01 21 Yesterday do you remember I was doing that chart
09:44:05 22 with you of things Mr. Bicks said versus the truth?

09:44:09 23 A Yes, sir. I saw that you did that.

09:44:11 24 Q I've got now the typed up final copy of the
09:44:15 25 transcript from our court reporter, and she stayed up until

09:44:19 1 four in the morning to do. And on page 830, this is Mr.

09:44:24 2 Bicks trying to tell the jury how often they test this

09:44:28 3 stuff.

09:44:29 4 He says: You'll see that talc comes off of a
09:44:33 5 conveyer belt, and on that conveyer belt they create samples
09:44:37 6 for testing. At the bottom would be the sample. How do
09:44:42 7 they do it? Every single hour of that conveyer belt they
09:44:48 8 take an amount of the talc. Every hour, every shift, every
09:44:53 9 working day they do this.

09:44:59 10 Take a look at a calendar. You'll see done every
09:45:02 11 day, every shift, every working hour. Over a hundred
09:45:05 12 thousand different samples taken, and it wasn't just one
09:45:09 13 month. It's every month for years. Do you see that?

09:45:16 14 A Yes.

09:45:22 15 Q So we've got Mr. Bicks saying hundreds of
09:45:34 16 thousands of -- give the impression, I think he's saying
09:45:45 17 that -- a month, but hundreds of thousands of tests every
09:45:51 18 day, every hour. Do you remember that?

09:45:54 19 A I do.

09:45:56 20 Q Tell the jury what they were testing every day,
09:46:00 21 every hour.

09:46:02 22 A It wasn't just for asbestos. They have all kinds
09:46:06 23 of tests; color, bacteria tests, odor. They did a lot of
09:46:16 24 tests, but a lot of it was to characterize what they were
09:46:20 25 digging out. Asbestos test was different. That was not

09:46:23 1 done every day, hundreds of thousands. Their TEM analysis,
09:46:27 2 as far as I can tell throughout those years, was 360.

09:46:32 3 That's all I can verify right at the moment.

09:46:38 4 Q For all of those years?

09:46:41 5 A That's the only, yes, that's the only amount I can
09:46:43 6 verify. If they have some more they haven't told us about.

09:46:48 7 Q This idea that they were testing, have you ever
09:46:52 8 seen any of those records that indicate hundreds of
09:46:56 9 thousands of tests for asbestos as opposed to what color is
09:47:00 10 it, does this smell, does it have bacteria?

09:47:05 11 A No, I haven't seen anything.

09:47:08 12 Q Have you ever seen anything that indicates they
09:47:10 13 had on-site at the mine the equipment to even begin to do
09:47:16 14 the kind of testing that has to be done in a lab for
09:47:19 15 asbestos?

09:47:21 16 A I don't believe they had their own transmission
09:47:25 17 electron microscope. I don't know if they had polarized
09:47:27 18 light microscopes or not. That doesn't take up a lot of
09:47:32 19 room. But I don't believe they have their own transmission
09:47:34 20 electron microscope at the mine.

09:47:37 21 Q And then Mr. Bicks also told the jury that you
09:47:43 22 will see in evidence from NIOSH, the Vermont talc, studies
09:47:51 23 going back to the early 1900s have shown the Vermont talc
09:47:56 24 deposits contain no asbestos. Do you see that?

09:48:03 25 A Yes.

09:48:05 1 Q Sir, aside from what Alice Blount just testified
09:48:08 2 to, do you have independent knowledge of whether or not
09:48:12 3 Vermont talc has ever been shown to have asbestos going back
09:48:16 4 to the early 1900s?

09:48:19 5 MR. DUBIN: Your Honor, I'm going to object.
09:48:20 6 This is beyond the scope of the witness' expertise. The
09:48:23 7 quote that was asked, what geologic studies show since the
09:48:26 8 1900's, the witness is not a geologist.

09:48:30 9 THE COURT: Overruled.

09:48:31 10 A Back to the 1900s. I'm not sure at the 1900s, but
09:48:36 11 there's been some optical microscopy work done even as early
09:48:42 12 as the '30s and '40s, where they're looking at slices of
09:48:48 13 mined rock. But as for actual transmission electron
09:48:54 14 microscope analysis, the first commercial microscope sold in
09:48:59 15 this country, an RCA, didn't really come under the market
09:49:04 16 until the late 1940s.

09:49:06 17 Q So if you go back to the early 1900s, did it even
09:49:11 18 have the electron microscope to see the asbestos?

09:49:17 19 A If you're characterizing the early 1900s as 1940,
09:49:24 20 no.

09:49:24 21 Q And by the same token, if we look at this -- well,
09:49:39 22 let me make my note. This is -- what kind of microscope,
09:49:47 23 again, that you would need to see these pictures you've got?

09:49:51 24 A To duplicate what we've done and the tests they're
09:49:55 25 doing or TEM, it's a transmission electron microscope.

09:50:02 1 Q All right. Brief testing. I want to ask you
09:50:06 2 about another document that I referenced with the jury
09:50:08 3 yesterday, and I need you to help explain some of the
09:50:11 4 scientific terms.

09:50:12 5 MR. LANIER: Your Honor, we move into
09:50:13 6 evidence Plaintiffs' Exhibit 73.

09:50:19 7 MR. DUBIN: That's previously objected to,
09:50:21 8 your Honor.

09:50:22 9 MR. LANIER: May I approach?

09:50:24 10 MR. DUBIN: Lacks foundation, not part of his
09:50:29 11 reliance list. Same issue.

09:50:32 12 THE COURT: What we took up this morning?

09:50:33 13 MR. LANIER: Yes, your Honor.

09:50:34 14 MR. DUBIN: Again, I don't think he has a
09:50:36 15 foundation to admit it at this point, irrespective of this
09:50:40 16 witness, pursuant to your Honor's comments this morning. I
09:50:44 17 believe he asked a question of scientific concepts.

09:50:48 18 THE COURT: Subject to prior rulings, the
09:50:49 19 Court will persist in its prior ruling.

09:50:52 20 MR. LANIER: Thank you, your Honor.

09:50:53 21 Q (By Mr. Lanier) So, sir, this is the folks who
09:50:58 22 bought the mine from Johnson & Johnson and continued to do
09:51:03 23 some testing. You're familiar with Julie Pier?

09:51:07 24 A Yes, sir.

09:51:09 25 Q And it's talking about who Johnson & Johnson was

09:51:12 1 having doing their testing. You are familiar with Johnson &
09:51:16 2 Johnson using RJ Lee to test their asbestos?

09:51:20 3 A I am.

09:51:22 4 Q Julie Pier writes in this: RJ Lee has a different
09:51:26 5 approach to the whole thing. They believe if you can find a
09:51:33 6 hint of a diffraction pattern from another mineral while
09:51:38 7 you're looking at the amphibole fiber, you can call the
09:51:41 8 fiber transitional and not truly amphibole.

09:51:47 9 Now, you understand that sentence?

09:51:51 10 A I do.

09:51:52 11 Q I'm going to be talking to some later witnesses
09:51:54 12 about it, and I want to make sure I've got the terms down so
09:51:58 13 we understand it and we can hold those later witnesses of
09:52:01 14 the company to it. Okay. So you got to help us understand
09:52:06 15 this. We'll be going back to our term sheet to do it.

09:52:10 16 A hint of a diffraction pattern. You've got to
09:52:16 17 teach us what a diffraction pattern is.

09:52:20 18 A If you go back to the photographs you were
09:52:23 19 showing, and you had one that looked like a bunch of dots
09:52:27 20 right behind the fibers.

09:52:30 21 Q Yes.

09:52:30 22 A That's a diffraction pattern. It's called in TEM,
09:52:34 23 SAED, selected area electron diffraction.

09:52:42 24 Q What does it mean?

09:52:43 25 A It means that, say this is your fiber in the TEM.

09:52:48 1 Your electron beam is coming down to the fiber, and because
09:52:52 2 you can see the image of some of those inside the fiber, the
09:52:56 3 electrons are going through the fiber, some are stopped.
09:52:59 4 But because these fibers are crystalline, everybody's seen a
09:53:04 5 prism where light comes in, and they'll break it into
09:53:09 6 colors. So electrons come in, and because of these
09:53:15 7 crystalline structures in there, it causes the electrons to
09:53:20 8 be scattered in particular directions because you have these
09:53:25 9 planes of atoms that become the crystal. So it hits it and
09:53:29 10 goes off a particular plane, it gives you a precise electron
09:53:35 11 diffraction pattern that we can measure and determine what
09:53:37 12 the crystal is.

09:53:38 13 Q Okay. I got to be honest with you.

09:53:41 14 A Didn't make any sense?

09:53:42 15 Q I'm kind of lost.

09:53:44 16 MR. LANIER: Your Honor, could he have
09:53:45 17 permission, if I pull the tablet around, to draw and explain
09:53:48 18 this --

09:53:49 19 THE COURT: Sure.

09:53:50 20 MR. LANIER: -- so we got a record of it?

09:53:54 21 Mr. Longo, Dr. Longo, I'd like you to -- you've got a mic
09:54:03 22 on, so it won't mess things up. Would you come explain that
09:54:07 23 to the jury? Maybe you can do it here on the ELMO, just
09:54:12 24 draw it on the ELMO. Would that be all right, your Honor?
09:54:15 25 And then I'll move the tablet, I think the ELMO would be

09:54:19 1 easier. Would you come explain this with, I don't know if
09:54:21 2 you draw worth a hill of beans?

09:54:24 3 A I don't.

09:54:25 4 Q (By Mr. Lanier) I'll give you clean sheet.
09:54:27 5 Unless you want me to try to do the drawing. I want you to
09:54:31 6 come down to the ELMO, please.

09:54:33 7 (The witness left the stand.)

09:54:35 8 Q (By Mr. Lanier) And show the jury, it's extremely
09:54:38 9 important that they understand what this sentence is, so I
09:54:40 10 would like you to show this to the jury. What we're
09:54:44 11 questioning is, what is a diffraction pattern?

09:54:48 12 A It would be helpful in those photographs you were
09:54:51 13 showing.

09:54:51 14 Q Of your report?

09:54:53 15 A You'll look on there like behind the fibers or
09:54:58 16 bundles that shows a pattern, just so I can have a starting
09:55:03 17 point of what you were showing.

09:55:10 18 Q Okay. I showed page 199. Would that be useful?

09:55:15 19 A Then right behind it.

09:55:17 20 Q Oh.

09:55:21 21 A This is diffraction pattern.

09:55:21 22 Q Okay.

09:55:22 23 A This is from -- that's the chemistry.

09:55:24 24 Q Okay.

09:55:25 25 A This is the -- a lot of things are going on when

09:55:28 1 this high energy electron beam hits the fiber. Not only do
09:55:32 2 you -- can see the fiber, but off into a different area is a
09:55:37 3 diffraction pattern that's being formed at the same time, we
09:55:42 4 just can't see it until we align the microscope to bring it
09:55:46 5 into focus.

09:55:47 6 This -- these dots that you have here and here and
09:55:53 7 here, is from the crystalline planes, like if you just look
09:55:59 8 at a crystal that's causing it to diffract or changes
09:56:02 9 directions, and it changes directions in a pretty standard
09:56:06 10 way.

09:56:06 11 So you can take these diffraction patterns, and
09:56:10 12 you can tell if you have an amphibole or whatever we're
09:56:13 13 interested in, asbestos fibers. So the way that happens,
09:56:17 14 I've drawn two fibers. Just pretend they're the same
09:56:21 15 fibers.

09:56:22 16 So an electron beam is coming like this and over
09:56:25 17 here like this. And in this one over here, because we're
09:56:31 18 looking at it down here, we can see that fiber. Because the
09:56:35 19 electrons are going through on the side, what we can't see
09:56:39 20 over here until we do something is we're developing these
09:56:44 21 dots.

09:56:54 22 And this is because at the same time that electron
09:56:58 23 beam is going through that fiber, those crystals in there
09:57:01 24 causing it to be diffracted, you just can't see it until you
09:57:05 25 change the conditions of the microscope, and we go from --

09:57:11 1 where's that fiber you have? There we go. We go from this,
09:57:18 2 on this side, flip a switch on the microscope, and then we
09:57:22 3 can see this. So this is our diffraction pattern. And it's
09:57:26 4 very precise in what we do. Is that better?

09:57:29 5 Q Yes, much better, thank you, I appreciate it.

09:57:33 6 (The witness resumed the stand.)

09:57:36 7 Q (By Mr. Lanier) Not that I'm going to be able to
09:57:37 8 write that down in anyway that we'll remember two weeks from
09:57:41 9 now, but I'm going to try. Diffraction pattern. That's
09:57:45 10 where you kind of flip the switch and look at the dots?

09:57:51 11 A The pattern is always there. It's -- believe it
09:57:55 12 or not, in advance x-ray diffraction you have to calculate
09:58:01 13 that, and it's in a place called reciprocal space, one over
09:58:07 14 space. The only graduating class I got to see, and it's a
09:58:12 15 gift to understand that concept.

09:58:13 16 So it's always there, but you can change the
09:58:16 17 conditions of the microscope to bring it into where you can
09:58:20 18 visualize it and record it.

09:58:22 19 Q All right. That gives us a start here. They
09:58:24 20 believe if you can find a hint of a diffraction pattern from
09:58:28 21 another mineral when you're looking at the amphibole fiber.
09:58:35 22 Define for us again what an amphibole fiber is in this
09:58:40 23 context.

09:58:40 24 A In this context, amphibole is a mineral that's
09:58:44 25 very common. It's a class of minerals. It's very common in

09:58:49 1 the earth's crust. But then we get down to what we call the
09:58:55 2 asbestos amphiboles, and those are the ones we're interested
09:59:01 3 in. So it's a type of amphibole asbestos.

09:59:04 4 Q And so the asbestos amphibole is what everybody's
09:59:11 5 looking for, it's what they're trying to figure out. If
09:59:14 6 it's an asbestos amphibole, is that another word for fiber?

09:59:20 7 A Fiber, bundle. As long as it meets the counting
09:59:23 8 criteria for the size we're looking at.

09:59:25 9 Q All right. So RJ Lee, the testing group, one of
09:59:29 10 them for the company, says if you can find a hint of a
09:59:34 11 diffraction pattern from another mineral while you're
09:59:37 12 looking at what might be an asbestos fiber, then you can
09:59:41 13 call the fiber transitional and not truly amphibole. What
09:59:47 14 does that mean to you?

09:59:50 15 A Well, I know that trick. If you go back to the
09:59:56 16 photograph of the fiber, or the bundle, you can see what
09:59:59 17 we're talking about here. Not the diffraction pattern, but
10:00:05 18 the fiber.

10:00:07 19 Okay. So here we have a fiber, and if I can come
10:00:12 20 back up I can show. This is --

10:00:15 21 MR. LANIER: Your Honor, can he come back up?

10:00:17 22 THE COURT: Sure.

10:00:18 23 MR. LANIER: Thank you.

10:00:18 24 (The witness left the stand.)

10:00:21 25 A In these samples, we don't just have asbestos

10:00:27 1 fibers or pieces of asbestos fibers, but we have talc too.
10:00:33 2 Even though we use this method to separate the talc from
10:00:38 3 potentially having asbestos in there, it's not 100 percent
10:00:41 4 efficient. It's about 98 or so, you're always going to find
10:00:45 5 some talc fibers down there.

10:00:47 6 Talc, and here's -- here's a talc plate. That's
10:00:54 7 right next to it. This particular one, ooh, I'm not even on
10:01:00 8 there.

10:01:00 9 Q No, it's not your fault. That's mine. All right.
10:01:05 10 So I want to write that in. This is talc right here?

10:01:09 11 A Talc plates. Here is the end of the asbestos.
10:01:13 12 And you notice it's got some weird kind of angles on it. On
10:01:18 13 top of this asbestos fiber is a talc plate. So these areas
10:01:27 14 that are sticking out is pieces of platy talc.

10:01:32 15 Remember, when we do this analysis and filter it
10:01:36 16 and do all the things we have to do, you're taking stuff
10:01:40 17 that's in three dimensions and putting it down on the
10:01:43 18 filter, so if you have fiber here and if you have a talc
10:01:48 19 plate up here you go on top of it.

10:01:50 20 If you take a diffraction pattern here, and we
10:01:55 21 make it a fine point just to get on there, you'll get what
10:01:58 22 you're supposed to get. You get down here, you'll get a
10:02:03 23 diffraction pattern that's primarily mostly from what it's
10:02:07 24 supposed to be from, plus some of the talc in there. So you
10:02:11 25 get some overlay over the diffraction patterns.

10:02:14 1 Q So you called this -- thank you, you can --

10:02:16 2 (The witness resumed the stand.)

10:02:18 3 Q (By Mr. Lanier) You call this a trick?

10:02:20 4 A Well, it's not so much a trick.

10:02:23 5 Q It was your word.

10:02:24 6 A I can't say what they're doing.

10:02:26 7 Q I'm not asking motive.

10:02:28 8 A I'm just saying if you're not careful, what
10:02:31 9 they're describing here will happen.

10:02:35 10 Q So if you've got an asbestos fiber, and I'll make
10:02:42 11 it red. You've got an asbestos fiber and has been mashed
10:02:55 12 down with some talc because you've mashed it down so you've
10:02:58 13 got talc over it.

10:03:03 14 Is there a way that a microscopist can maneuver
10:03:08 15 the process so it shows it not to be asbestos but shows it
10:03:14 16 to be talc?

10:03:16 17 A If you take a diffraction pattern with the talc on
10:03:19 18 top of the fiber you'll get some of that pattern mixed in,
10:03:23 19 so the whole pattern will look different. Or if you have
10:03:27 20 talc right next to it, you'll get scatter from that, or if
10:03:32 21 you tilt it in such a way you can do sort of the same thing.

10:03:35 22 Q Well, that's the next sentence here that I've
10:03:37 23 highlighted. The analyst told me when she's finds the
10:03:41 24 tremolite fiber -- that tremolite, that's the bad asbestos?

10:03:44 25 A That's asbestos. It's a fiber, so that's an

10:03:48 1 asbestos fiber.

10:03:49 2 Q When she finds the tremolite asbestos fiber, she
10:03:52 3 will tilt the stage until she can see a talc diffraction
10:03:58 4 pattern come into view. Now, what is, what is she --
10:04:07 5 explain that process, please.

10:04:11 6 A Well, normally your sample goes in, it's flat like
10:04:16 7 this. It's got we call zero tilt. Now, these microscopes
10:04:23 8 you can tilt the sample so we can go from zero to start off,
10:04:28 9 go to 5, 10, 25 is about the most.

10:04:31 10 So, remember, your electron beam is coming down
10:04:37 11 and you're putting a spot on it, then the diffraction
10:04:39 12 pattern comes underneath. If you don't keep this perfectly
10:04:44 13 lined while you tilt it or look what you're doing and tilt
10:04:47 14 it, if you've got a particle over here and you tilt it
10:04:50 15 enough, that diffraction pattern will be omitted and it will
10:04:56 16 strike some of that talc particle and you'll start getting
10:05:01 17 that mixed in with it.

10:05:03 18 So you can -- so if you were to tilt it in such a
10:05:06 19 way, you can start getting the electron beam hitting the
10:05:10 20 talc more than hitting the fiber because it's right next to
10:05:14 21 it.

10:05:14 22 Q All right. So if I got the beam coming down and
10:05:17 23 the arrows that I've done with blue, and it hits this red
10:05:20 24 asbestos, is it going to tell us that there's asbestos in
10:05:23 25 there, say, a tremolite fiber?

10:05:28 1 A Yes. You take the electron beam, which is spread
10:05:31 2 out because you can see everything because you're
10:05:35 3 concentrated to a point, and the machine can do that for you
10:05:39 4 by just changing the strength of the electromagnetic lenses,
10:05:43 5 you squeeze it more.

10:05:44 6 Q Now, if RJ Lee instead starts tilting and that
10:05:51 7 electron beam is coming down here instead, is it going to
10:05:56 8 show the talc instead of the asbestos?

10:05:59 9 A If you tilt it far enough and don't keep it
10:06:02 10 aligned or have it in the wrong place, yes, you can change
10:06:05 11 that diffraction pattern to show something else.

10:06:07 12 Q And then all of a sudden you can report it as
10:06:10 13 asbestos-free?

10:06:12 14 A I guess that's -- it looks like that's what
10:06:15 15 they're doing.

10:06:19 16 Q In fairness to the corporate representative, she
10:06:23 17 did say I am very skeptical of this. And you're not --
10:06:26 18 you're not doing anything about the motive, so I want you to
10:06:32 19 stay away that, but I want you to pick up the next sentence.

10:06:37 20 There is a lot of the scatter of the electrons,
10:06:39 21 and you can sometimes get interference in the diffraction
10:06:42 22 pattern from adjacent particles, especially at higher tilt.
10:06:48 23 Is that exactly what you were explaining to us?

10:06:52 24 A Yes, that's what I said. That's what you can do
10:06:54 25 with this.

Q All right. So as we continue then to look at this with different types of tests, and we've got now this test that we are considering, the RJ Lee tilt the sample. I want to shift to another one.

Mr. Bicks indicated to the jury in his opening that asbestos -- when you see asbestos you can see the fibers. Your Honor, I'm reading from page 820. Hard, long. If you get those on your skin they're prickly, they don't do what the talc does. Johnson & Johnson doesn't want asbestos in its talc, that's why it's tested. Why it was so careful, hired the best scientists.

Now, my first question to you about this is, honestly, these little tremolite fibers that are -- you're finding in the baby powder these tremolite asbestos fibers, are they really hard and long, they get on your skin and are prickly?

A I guess it's how you define hard and long, but in reality, the size of these fibers and bundles in the concentration, even though it is high for what we deal with, the concentration of asbestos compared to all the talc particles, you got to assume that for every asbestos fiber there's a million talc particles, the answer to your question is no. This is not the size or type of asbestos in this product that these concentrations, that you would ever feel it.

10:08:36 1 Q Is this the kind of thing if I sprinkle the baby
10:08:38 2 powder on me, I can do an asbestos test just by seeing if
10:08:42 3 it's prickly on my skin?

10:08:43 4 A No, that's not a recognized technique.

10:08:51 5 Q Well, I got some other techniques, let's look at.
10:08:57 6 One is, I'm going to show you a document.

10:09:01 7 MR. LANIER: Your Honor, we move into
10:09:02 8 evidence Plaintiffs' 1202. This is the document we
10:09:07 9 discussed also this morning.

10:09:10 10 THE COURT: Mr. Dubin.

10:09:11 11 MR. DUBIN: Again, same objection as this
10:09:13 12 witness. I don't think there's a ground to admit this
10:09:16 13 document with this witness per your Honor's ruling
10:09:19 14 previously of the scientific concepts.

10:09:23 15 THE COURT: Very well. Will be received
10:09:25 16 subject to the prior ruling.

10:09:27 17 Q (By Mr. Lanier) All right. Sir, 1202 is a
10:09:32 18 technical report, the Microscopy Analysis of Serpentine
10:09:39 19 Minerals in the Broughton Ore from Julie Pier, who wrote
10:09:47 20 that last document we looked at. This is back in January of
10:09:50 21 2001.

10:09:51 22 And she talks here on page 4, and says the Johnson
10:09:54 23 & Johnson procedure also utilizes a different prep procedure
10:10:00 24 in which the overall amount of product analyzed could be
10:10:05 25 easily overestimated, falsely lowering the asbestos content.

10:10:13 1 Do you see that?

10:10:16 2 A Yes, sir.

10:10:17 3 Q Now, I want to take a step back and make sure we
10:10:22 4 understand all of this. It shows Bain. Who is Bain, do you
10:10:27 5 know?

10:10:30 6 A I can't remember who Bain was.

10:10:32 7 Q All right. I think the records will reflect and
10:10:35 8 Johnson & Johnson will agree that's one of the companies
10:10:37 9 they use to test.

10:10:38 10 A Oh, that's right.

10:10:40 11 Q Bain used a Johnson & Johnson procedure that
10:10:45 12 Luzenac had requested in the past for the grade 66 product
10:10:50 13 certification in which all fibers greater than one, what's
10:10:55 14 that, micrometer?

10:10:57 15 A That's a micrometer.

10:11:00 16 Q Not .5 micrometers are counted. Re-analysis of
10:11:03 17 the RJ Lee data, that's the company that we were just
10:11:07 18 talking about, with this tighter restriction lowers the
10:11:09 19 result somewhat, but not enough to account for this great a
10:11:14 20 difference.

10:11:16 21 The Johnson & Johnson procedure also utilizes a
10:11:20 22 different prep procedure, in which the overall amount of the
10:11:24 23 product analyzed could be easily overestimated, falsely
10:11:29 24 lowering the asbestos content.

10:11:34 25 Do you see that?

10:11:35 1 A Yes, sir.

10:11:35 2 Q And, first of all, if Mr. Bicks is right that
10:11:39 3 there's never been any asbestos in Vermont talc, there's
10:11:43 4 never been any asbestos in their product, it can't be found
10:11:46 5 anywhere, how would you lower something that doesn't exist?

10:11:53 6 A Those statements would be inconsistent.

10:11:55 7 Q And then if the procedure Johnson & Johnson uses
10:11:58 8 falsely lowers it, is that a good thing or a bad thing?

10:12:04 9 MR. DUBIN: Objection, your Honor. This is
10:12:06 10 all just argument at this point.

10:12:08 11 THE COURT: Sustained.

10:12:10 12 Q (By Mr. Lanier) In science, is it good scientific
10:12:15 13 approach to falsely lower asbestos content?

10:12:21 14 A No.

10:12:29 15 Q Tell the jury some of the Johnson & Johnson
10:12:36 16 approach for how they would test and actually decide to call
10:12:43 17 it asbestos, how would Johnson & Johnson do it?

10:12:49 18 A They'd have a litany of tests, it's not a litany,
10:12:55 19 they basically do it by three ways. They start off with
10:12:59 20 X-ray diffraction. That's just like the X-ray diffraction
10:13:06 21 patterns in the TEM, but not on the microscale. You can do
10:13:10 22 the whole sample.

10:13:11 23 Bombarded with X-rays, the different crystalline
10:13:16 24 structures in there will cause a diffraction pattern, and
10:13:20 25 you can then determine, using standards, what weight amount

10:13:22 1 of things like tremolite, anthophyllite, other minerals,
10:13:28 2 non-asbestos minerals, but it can't tell you if it's
10:13:32 3 fibrous. And it can't tell you if it's even there to what I
10:13:36 4 would call at the trace level.

10:13:37 5 Q All right. So the first thing they do is what
10:13:40 6 kind of a test?

10:13:41 7 A It's XRD.

10:13:43 8 Q X-ray?

10:13:46 9 A XRD is X-ray diffraction.

10:13:49 10 Q Diffraction. And is that an adequate test to pick
10:14:00 11 up trace amounts?

10:14:02 12 A In this product, no.

10:14:13 13 Q Bathroom scales.

10:14:16 14 A Yes.

10:14:18 15 Q Will bathroom scales work to pick up weight?
10:14:22 16 Let's see if I can take the light off and make this work a
10:14:30 17 little better. There we go. Will bathroom scales pick up
10:14:36 18 weight?

10:14:37 19 A Sure. As long as there's enough weight to pick it
10:14:40 20 up.

10:14:40 21 Q All right. So I can lean on this and see that I
10:14:43 22 weigh 18 pounds?

10:14:45 23 A No. You would be dead.

10:14:50 24 Q But if I wanted to weigh something as small as an
10:14:53 25 asbestos needle, will a bathroom scale do that?

10:15:02 1 A No, it doesn't -- what we call the sensitivity of
10:15:05 2 the analysis. It's the analytical sensitivity. What amount
10:15:10 3 do you have to have to get a positive reading. One fiber.
10:15:14 4 How much do you have to have in there to get a positive
10:15:17 5 reading. Is it the test sensitive?

10:15:19 6 Q I mean, I can take, instead of a bathroom scales,
10:15:23 7 there are such things as jeweler scales, correct?

10:15:28 8 A Correct.

10:15:28 9 Q And we can take a jeweler's scale, and the
10:15:37 10 jeweler's scale will give us -- is it more sensitive?

10:15:43 11 A Yes, it is. You can see by looking at all the
10:15:46 12 zeros, you got 0.000. As we call it the tear amount, that's
10:15:54 13 where you start with.

10:15:55 14 Q So one needle, not a bundle, but one needle.
10:16:03 15 Let's see if I can get that to show.

10:16:10 16 A And your units are in grams, so that weighs 0.06
10:16:13 17 grams.

10:16:16 18 Q Two needles?

10:16:20 19 A Pretty good. It doubles. Good quality control on
10:16:25 20 those needles.

10:16:27 21 Q Three needles. I can weigh needles all day long,
10:16:33 22 and I can decide whether or not they are needles, fair?

10:16:36 23 A That's fair.

10:16:38 24 Q But if I want to take those four needles and do
10:16:44 25 the same thing with a bathroom scale, how much luck am I

10:16:50 1 going to have if I'm using a scale that's not sensitive

10:16:53 2 enough. Let's put that first needle on there. Will the

10:17:04 3 scale tell me if there's a needle?

10:17:06 4 A No. That's in pounds, but that would be 1 pound

10:17:14 5 equals approximately 454 grams, so you'll have to stick a

10:17:20 6 lot of needles on there to get 45 grams when they only weigh

10:17:24 7 .00 -- is it .006?

10:17:34 8 Q It went off because it doesn't register anything

10:17:37 9 being on there. I got to restart. I mean, if I'm going to

10:17:43 10 get this scale to register anything at all, put my glasses

10:17:50 11 on there. Clip. Needles. Heck, put the other scale on

10:17:58 12 there.

10:17:58 13 A No. It's not as sensitive because it's dealing

10:18:03 14 with a bathroom scale has a set mind of where humans would

10:18:10 15 start off on weight for their age group. So it's designed

10:18:14 16 for a person to set on -- stand on, excuse me.

10:18:17 17 Q So if I use the wrong scale, I have all that on

10:18:21 18 there, and I can tell everybody, hey, there are no pins of

10:18:28 19 any kind, straight pins or marking pens, there are no

10:18:32 20 glasses. There are no clips. There's nothing on there.

10:18:36 21 A Correct.

10:18:40 22 Q Now, you talked about the company's failure to use

10:18:44 23 a sensitive enough analysis on that first layer.

10:18:51 24 MR. LANIER: Your Honor, I'm going to have

10:18:53 25 pins on the ground. I promise I will try during the break,

10:18:56 1 I only took four out, to rescue all four.

10:19:00 2 Q (By Mr. Lanier) That's not the only kind of test,
10:19:02 3 though, the company did. They didn't only do one that's
10:19:06 4 like a bathroom scales, fair?

10:19:08 5 A Fair. They would -- they would do XRD, which
10:19:12 6 has -- today, good state-of-the-art ones, a really good
10:19:17 7 person who knows how to use it and make the sample. About
10:19:20 8 the best you're going to get is a 0.1 weight percent,
10:19:25 9 that's -- if you have a standard and they do it pretty well.
10:19:30 10 But typically your analytical sensitivity is in the .1 to
10:19:37 11 .5 percent range.

10:19:39 12 Q All right. I messed up because I was cleaning up
10:19:42 13 for a moment. So X-ray diffraction, how sensitive is that?
10:19:46 14 How much asbestos do you have to pick it up?

10:19:49 15 A For tremolite asbestos or just --

10:19:52 16 Q Or actinolite or anthophyllite.

10:19:55 17 A Tremolite and actinolite, it's pretty much the
10:19:57 18 same. It's in the .1 to .3 weight percent.

10:20:03 19 Q 1 percent to .3 percent of weight. All right.
10:20:08 20 And if the company gets a no on the bathroom scales, what
10:20:14 21 would the company do next?

10:20:16 22 A Typically they would stop.

10:20:19 23 MR. DUBIN: I'm going to object. That lacks
10:20:22 24 foundation.

10:20:23 25 THE COURT: Overruled.

10:20:25 1 Q (By Mr. Lanier) So, the company puts the stuff on
10:20:28 2 the bathroom scales and if it doesn't register they just say
10:20:32 3 we're done. If it does register on a bathroom scales, what
10:20:36 4 do they do?

10:20:38 5 A Then they would go to polarized light microscopy.

10:20:42 6 Q And that's polarized light microscopy. What is
10:20:49 7 that?

10:20:50 8 A PLM. It's an optical microscope. And, again,
10:20:54 9 we're dealing with crystals. So the polarized light
10:20:59 10 microscope can take light that's moving in these wavelengths
10:21:04 11 of lighting here, going in all different directions. Like
10:21:09 12 polarized sun glasses, that takes the light that's coming
10:21:12 13 straight at you and lets it in and gets all the scatter out.
10:21:17 14 That's why you can put them on, look at lights, and all of a
10:21:19 15 sudden you can start seeing the fish, because you're not
10:21:23 16 getting all that scatter.

10:21:24 17 That's how polarized light lends its work. So if
10:21:27 18 you do it here and you line the light up in one direction.
10:21:30 19 When it goes through a crystal, if you change the direction
10:21:34 20 of that light and you do it by just changing the direction
10:21:37 21 of the crystal, it will turn colors, polarized colors.

10:21:41 22 Q We saw that with Dr. Blount's -- that's what she
10:21:44 23 was doing. You've seen that as well?

10:21:46 24 A Yeah, it just changes. You line -- you line up
10:21:49 25 the -- and they're really big bundles. And if you line it

10:21:54 1 up and then you just rotate the stage and you rotate it 90
10:21:57 2 degrees. If it's a particular type of asbestos it's got to
10:22:01 3 change colors when you do that rotation.

10:22:03 4 Q Okay. And if the company does not find asbestos,
10:22:07 5 and we're going to come back to how this test was rigged in
10:22:10 6 a little bit, but if the company does not find asbestos
10:22:13 7 there, what would they do for -- would they stop then?

10:22:16 8 A According to their flow sheet of tests they would
10:22:20 9 stop.

10:22:20 10 Q Okay. And if, in fact, they find it still there,
10:22:24 11 so they found it on the scales, they found it that way.
10:22:27 12 Then what would they do to try to find a way to say no?

10:22:31 13 A Well, I'm not suggesting they're finding a way to
10:22:34 14 say no or not.

10:22:36 15 Q Fair enough. I should not ask a motive question
10:22:38 16 of you. Then what would be done to determine the answer of
10:22:42 17 whether they report it?

10:22:43 18 A Then they would use microscopy, which is the most
10:22:48 19 sensitive method. So that would be the final method.

10:22:54 20 Q And that's that big machine you've been telling us
10:22:58 21 about that you use that finds it?

10:23:00 22 A Yes, sir. We have four of those machines.

10:23:03 23 Q Now, you've got a very -- not just you, the -- a
10:23:09 24 number of different scientists over the last 40 years have
10:23:12 25 talked about a specific way to do test two and three. Is

10:23:17 1 that fair to say?

10:23:19 2 A That's fair.

10:23:20 3 Q And we can call that -- what would you call that
10:23:22 4 to the jury?

10:23:24 5 A For the polarized light microscopy test, everybody
10:23:27 6 calls it the R93 method, the draft EPA method.

10:23:34 7 Q Is it a concentration method? I'm looking for
10:23:38 8 something --

10:23:39 9 A Ah, no. The two ways to do the polarized light
10:23:43 10 microscopy method and the TEM method. One is just to look
10:23:47 11 at it just like it is, take the talc, put it on a glass
10:23:51 12 slide, that's what you analyze. Or you go through this
10:23:55 13 concentration method, you get the talc out of there so that
10:23:59 14 you literally -- you're looking for needles in a haystack at
10:24:03 15 these trace concentrations.

10:24:05 16 Get rid of the haystack, the needles are easier to
10:24:08 17 find. Otherwise, all that hay you got to dig through it,
10:24:12 18 you don't find it a lot.

10:24:14 19 Q All right. So two -- Mr. Bicks' point that the
10:24:19 20 company even uses TEM, as you do, TEM being something that's
10:24:24 21 really fine that will pick it up like the jeweler's scales.

10:24:29 22 A That is correct.

10:24:29 23 Q If what we're looking at -- if what we're looking
10:24:43 24 at is trying to find a needle in a haystack -- your Honor, I
10:24:53 25 did not bring a haystack into your courtroom, but I did get

10:24:58 1 a bale of hay if that's all right with the Court. I'm going
10:25:08 2 to sweep up at lunch.

10:25:10 3 So, if we need to find out if there is a needle or
10:25:18 4 a hundred or a thousand or a million, a needle in the
10:25:21 5 haystack. If you do it the way the company did it, where
10:25:32 6 they just take off one little piece and they put it on
10:25:37 7 there, what are the odds of you ever taking off the little
10:25:43 8 piece that's going to have the needle?

10:25:47 9 A The odds aren't good unless that particular sample
10:25:50 10 has what I would call the way higher end of the asbestos
10:25:56 11 content as compared to what we would call trace.

10:26:00 12 Q Can you find the needle in the haystack by just
10:26:05 13 taking off one little piece at the corner?

10:26:07 14 A No. You have to find -- if you don't concentrate
10:26:12 15 it you have to start doing other things like looking at it
10:26:15 16 for a really long time in the electron microscope to see
10:26:19 17 more and more in the area with the hope that getting enough
10:26:23 18 of a high analytical sensitivity, that is how much do I have
10:26:27 19 to have in there to find one fiber.

10:26:29 20 So if I measure it and I'm analyzing it, there has
10:26:33 21 to be a certain concentration in there for me to see. So
10:26:37 22 that's statistically -- I'm going to run into one. So
10:26:41 23 there's a concentration that is called your analytical
10:26:47 24 sensitivity, how much has to be in there for me to find one.

10:26:50 25 Q So you're saying for this method to work you need

10:26:56 1 to concentrate it as opposed to just blind luck, let me
10:27:01 2 check it for asbestos needles?

10:27:05 3 A For me, it's what's the most efficient way to give
10:27:10 4 me the best analytical sensitivity so that I can say, okay,
10:27:15 5 when I analyzed it, I know that at least there's not this
10:27:21 6 much there or above. Because I've got down to my best
10:27:26 7 analytical sensitivity.

10:27:27 8 If you don't do the concentration method with
10:27:30 9 talc, you run into a problem for every asbestos fiber, or
10:27:34 10 there's at least one million talc particles.

10:27:39 11 Now, when you're dealing with at all a glass slide
10:27:42 12 or TEM grid, you can't have that much talc laying in there
10:27:47 13 because it covers everything up, so we have to dilute it.
10:27:49 14 And then when we dilute it that means we got to go look at a
10:27:54 15 whole bunch of area in the TEM, that takes a long time.

10:27:58 16 Now, we can get rid of the talc, get rid of the
10:28:01 17 hay, just collect the needles if they're there, gets more
10:28:05 18 efficient and a much better analytical sensitivity.

10:28:10 19 Q I know you don't burn away the talc, you burn away
10:28:13 20 hay maybe. You're saying, to use an analogy or metaphor, if
10:28:17 21 we burned all this hay and got rid of all the ashes and then
10:28:21 22 looked at what was left to put up there to test, we got a
10:28:24 23 better shot at finding the needles?

10:28:27 24 A Yes. Say the little bit you have on the floor
10:28:30 25 there, we still see a little bit of talc when we

10:28:33 1 concentrate. We get rid of that, but we still have some on
10:28:37 2 the bottom.

10:28:38 3 Q That's the picture you showed us, the picture
10:28:41 4 that's got the talc as well as the -- on top of the asbestos
10:28:45 5 fiber?

10:28:45 6 A Yes. We don't see that too often actually on a
10:28:48 7 asbestos fiber, but you are seeing some talc. Now, if we
10:28:51 8 had used the same amount, you have to understand we start
10:28:54 9 with like a recipe, you know, a cup of sugar. We're using a
10:29:00 10 cup of sugar. If I hadn't concentrated that cup of talc
10:29:06 11 would have obliterated that sample. You wouldn't be able to
10:29:08 12 see anything. There would be so much talc stacked on top of
10:29:12 13 each other, any asbestos fibers in there would be hiding.

10:29:15 14 So we get rid of the talc as much as we can, those
10:29:18 15 asbestos fibers are getting in the bottom of the test tube,
10:29:21 16 so now we made it that we can actually find if it's there or
10:29:26 17 not. But if you use the amount we used in a TEM and didn't
10:29:30 18 do this concentration method it would just be black. You
10:29:34 19 couldn't see through it.

10:29:35 20 Q So the way that the company does it and the way
10:29:37 21 the company has it done, are you surprised that they, most
10:29:44 22 of the time, don't find asbestos fibers?

10:29:48 23 A No, I'm not surprised at all.

10:29:50 24 Q And then the few times that they do, we've got the
10:29:53 25 tilt the scales and all the rest that we were talking about;

10:29:57 1 is that right?

10:29:57 2 A Well, they have found it in TEM.

10:30:01 3 Q They have found it. Go ahead and tell the jury
10:30:04 4 what it is.

10:30:05 5 A They have found asbestos by TEM in the past in
10:30:09 6 their talc samples. They'll find two, three fibers maybe.
10:30:14 7 So the concentration, in my opinion, is higher than what
10:30:17 8 we're normally seeing in there, or they just got really
10:30:21 9 lucky this one time statistically that they ran into one,
10:30:24 10 even though their analytical sensitivity is so bad.

10:30:28 11 Q By the way, tell the jury how many Johnson &
10:30:30 12 Johnson requires them to find before they'll call it
10:30:33 13 asbestos and report it as being there.

10:30:35 14 A You have to find five asbestos fibers of one type.
10:30:40 15 So we'll go to tremolite. If you see four tremolite fibers,
10:30:47 16 you have to call it non-detective or non-quantifiable. You
10:30:51 17 have to have five.

10:30:52 18 Now, if there's tremolite and anthophyllite, it's
10:30:57 19 not six. It's five anthophyllite. So now it has to have
10:31:03 20 five tremolite, five anthophyllite. And if it has another
10:31:08 21 asbestos in there, you've got to have five of those.

10:31:10 22 So you're not just dealing with finding one fiber
10:31:13 23 and call it asbestos. You're dealing with you got to have a
10:31:17 24 bunch in there before they say it's asbestos containing.

10:31:20 25 Q So they can find four fibers just like a blind hog

10:31:24 1 will find an acorn, or you can find sometimes a needle in a
10:31:28 2 haystack, they might find four tremolite fibers, but they'll
10:31:32 3 report it as no asbestos because they've arbitrarily set
10:31:35 4 this threshold that there's not five?

10:31:38 5 A They say -- they set it to say that they're
10:31:42 6 accounting for contamination on their filters, that the
10:31:46 7 filters they're using will have asbestos on it, so you got
10:31:49 8 to take that into account so you don't skew the results
10:31:52 9 because it's on their filters. That it's in the background
10:31:56 10 air. That this is normal accounting procedures.

10:31:59 11 And every protocol will have some of that if you
10:32:02 12 look at your background samples, if you, in fact, have
10:32:05 13 asbestos in your cleaning filters, you have to take that
10:32:08 14 into account.

10:32:09 15 Q Well, I mean, do you have tremolite asbestos on
10:32:12 16 your clean filters, is that pretty common?

10:32:15 17 A No. It's not common at all. If asbestos starts
10:32:19 18 showing up on your blanks and your filters, you need to hire
10:32:24 19 a new lab manager, because that's unacceptable. Especially
10:32:28 20 tremolite, because that's not asbestos that is routine
10:32:33 21 through the lab or products. That's not something we see
10:32:37 22 ever is tremolite on our clean filters and our clean stuff
10:32:42 23 that we're using.

10:32:43 24 Q So in the process of this, when Mr. Bicks told
10:32:46 25 this jury that they had, quote, thoroughly tested their

10:32:51 1 asbestos and had it thoroughly tested and that they used
10:32:56 2 these three different approaches to do it, the way they did
10:33:03 3 it, is this going to help anybody at all find asbestos if
10:33:06 4 you really want to find it?

10:33:09 5 A Not for this type of product, because we're
10:33:11 6 dealing with trace concentrations. And this is not your
10:33:18 7 typical asbestos construction product that you put into a
10:33:22 8 building where it has 10 percent, 5 percent asbestos. These
10:33:26 9 materials, after they're dug out of the ground, the talc,
10:33:30 10 cosmetic talc is milled, it's ground, so you're dealing
10:33:33 11 with -- not only you're dealing with the talc in very small
10:33:38 12 sizes, you're dealing with there's big bundles in there they
10:33:41 13 may pull apart.

10:33:43 14 So this is not the type of analysis where you can
10:33:46 15 rely on just XRD or just on PLM, if you have a negative.
10:33:52 16 Certainly, if you have a positive by polarized light
10:33:54 17 microscopy, that gives you information, that will tell you,
10:33:57 18 yes, I've got asbestos here, but it's typically at a higher
10:34:00 19 concentration, at least what we're seeing.

10:34:03 20 Q All right. So you and some others have talked
10:34:05 21 about using, if you want to make it work, what you call
10:34:11 22 separating out and concentrating the asbestos?

10:34:14 23 A Correct.

10:34:15 24 Q That's the next subject I'd like to get into, your
10:34:17 25 Honor. I don't know how you time your breaks. I can keep

10:34:20 1 going right now or we can take a break.

10:34:22 2 THE COURT: Folks, you got another 15

10:34:24 3 minutes? Looks like we got a split decision here. We're

10:34:31 4 going to go ahead and take our break this morning. Let's go

10:34:34 5 to five minutes to 11. If you would be upstairs subject to

10:34:37 6 the call of the -- Doctor, you can have a seat here.

10:34:42 7 THE WITNESS: I'm sorry, your Honor. I saw

10:34:44 8 people standing, I was right in your way.

10:34:46 9 THE COURT: All right. Sheriff will be up

10:34:49 10 about five till. Thanks for your work this morning.

10:34:52 11 Remember what we talked about. Until the case is

10:34:54 12 given to you to decide, please do not discuss the case among

10:34:58 13 yourselves, with others, or permit anyone to discuss it

10:35:02 14 within your hearing.

10:35:03 15 Do not form or express any opinion about the case.

10:35:06 16 Do not communicate about the case. Do not do any research

10:35:08 17 or investigation. And please remove yourself from any

10:35:12 18 situation where information about this case comes your way.

10:35:17 19 Once again, thanks for your work. We'll see you

10:35:19 20 in about 15 minutes upstairs. You are excused.

10:36:02 21 (The following proceedings were had in open

10:36:02 22 court, outside the presence and hearing of the jury:)

10:36:03 23 THE COURT: All right. Doctor, you can step

10:36:05 24 down.

10:36:05 25 THE WITNESS: Sorry about that.

10:36:07 1 THE COURT: That's okay. That's all right.

10:36:09 2 Anything before we -- anything needs to be on the record?

10:36:13 3 MR. LANIER: Not for Plaintiff, your Honor.

10:36:15 4 THE COURT: Mr. Dubin?

10:36:16 5 MR. DUBIN: No, your Honor.

10:36:18 6 THE COURT: Court will be in temporary

10:36:20 7 recess.

10:36:20 8 (Proceedings stood in temporary recess, after

10:36:20 9 which the following proceedings were had in open court:)

11:03:18 10 THE COURT: Thank you. We'll be back in

11:03:19 11 session, please be seated. All right.

11:03:25 12 Further inquiry on behalf of the plaintiff,

11:03:27 13 Mr. Lanier.

11:03:28 14 MR. LANIER: Thank you, your Honor. May it

11:03:29 15 please the Court.

11:03:30 16 THE COURT: Yes, sir.

11:03:30 17 **DIRECT EXAMINATION CONTINUED**

11:03:31 18 BY MR. LANIER:

11:03:33 19 Q Dr. Longo, aside from these testing approaches,

11:03:39 20 right before we leave our stop on what I've called rigged

11:03:46 21 tests, I want to ask you about one more test that Mr. Bicks

11:03:52 22 talked about in opening.

11:03:53 23 Mr. Bicks' opening on page 831, where he was

11:03:58 24 describing these tests after he talked about that third one

11:04:02 25 we looked at, the TEM test. Mr. Bicks said, says: J&J

11:04:14 1 actually even went beyond that because it did audits where
11:04:19 2 it not only used these three techniques which you'll learn
11:04:23 3 about, but it even went beyond and used something called
11:04:28 4 differential thermal analysis.

11:04:32 5 Are you familiar with differential thermal
11:04:37 6 analysis?

11:04:40 7 A Yes.

11:04:41 8 Q What is differential thermal analysis?

11:04:46 9 A Simply heating a sample up and when it changes
11:04:54 10 from crystal form and melts, what have you, it can either
11:05:00 11 give off heat or take in heat.

11:05:02 12 Q I can't hear you.

11:05:02 13 A Yeah. Is it on?

11:05:03 14 Q Yes, it's on.

11:05:04 15 A It's measuring a particular piece of material like
11:05:09 16 polymer, where it melts, and when it melts --

11:05:10 17 Q Polymer's a plastic?

11:05:12 18 A Right. It's used for a lot of different tests.

11:05:14 19 Where something changes in form. It either melts or
11:05:18 20 crystallizes or melts and then solidifies again, and that
11:05:24 21 you can measure where that happens at a certain temperature.

11:05:27 22 Q How useful is that for figuring out if there's
11:05:29 23 asbestos in their talc?

11:05:31 24 A It's not very useful. It's not a technique that
11:05:34 25 is recognized by any of the agencies for how we have to test

11:05:38 1 these materials. These are the standard techniques we have
11:05:42 2 up there that are used. X-ray diffraction, polarized light
11:05:46 3 microscopy, and transmission electron microscopy. Those are
11:05:49 4 the only certified methods in this country.

11:05:54 5 We have a differential scanning calorimeter that
11:05:58 6 does the same thing, but it's not something we use for
11:06:02 7 asbestos. Somebody says what's the melting temperature of
11:06:05 8 this polymer, or this crystalline material, where does it
11:06:09 9 change form when you heat it up, and it can tell you very
11:06:13 10 precisely at what temperatures.

11:06:15 11 Q Last night you and I visited for about 30 or 45
11:06:19 12 minutes, and I was asking you about this, and you likened it
11:06:22 13 to pin the tail on the donkey?

11:06:26 14 A I didn't know you were going to use that.

11:06:28 15 Q I know you didn't it. You wouldn't have let me so
11:06:30 16 I did it without telling you.

11:06:33 17 Can you explain to us why, you said it was like
11:06:36 18 pin the tail on the donkey blindfolded. Tell us -- tell the
11:06:40 19 jury why you would use that analogy with me yesterday?

11:06:44 20 A Because you would never know if you were actually
11:06:47 21 pinning it or not, because it can't tell you exactly what
11:06:50 22 you need to know like XRD and PLM and TEM. Those are all
11:06:56 23 good methods, you just have to know its limitations and
11:07:00 24 sensitivity.

11:07:01 25 Q Now, I want to move into the concentration method

11:07:05 1 in a moment, but before I do, you just said something that I
11:07:08 2 think's very important. Are you criticizing using X-ray
11:07:12 3 diffraction, polarized light microscopy and transmission
11:07:16 4 electron microscopy, as just approaches?

11:07:19 5 A No. During the '70s, 60s, these were the
11:07:25 6 state-of-the-art measurements for analyzing for asbestos.
11:07:31 7 Polarized light microscopy goes back years and years and
11:07:33 8 years. But if you use the method where it's not sensitive
11:07:40 9 enough for what you're looking at, you just have to
11:07:42 10 understand that.

11:07:43 11 Polarized light microscopy is something we do in
11:07:46 12 our lab today. We analyze hundreds and hundreds of
11:07:49 13 thousands of asbestos samples by polarized light microscopy.

11:07:53 14 But these are construction asbestos products.
11:07:58 15 These are things made specifically to put into a building or
11:08:01 16 house. So you're usually having to deal with is it greater
11:08:04 17 than or less than 1 percent asbestos.

11:08:07 18 Polarized light microscopy do that all day long.
11:08:09 19 XRD, not as much, but it's very good technique for looking
11:08:13 20 for minerals. And you have an unknown sample and some
11:08:16 21 people will use it for asbestos. But we're looking for
11:08:20 22 asbestos products that if you want to average all the
11:08:23 23 construction asbestos products out, probably in the 10 to
11:08:28 24 15 percent range.

11:08:29 25 These are really good techniques for that. Not

11:08:32 1 good when you start getting below this tenth of a
11:08:36 2 weight percent. Then it starts losing its ability to really
11:08:40 3 see what's there because it has resolution issues or
11:08:43 4 analytical sensitivity.

11:08:46 5 Q Do bathroom scales work if you're weighing the
11:08:49 6 right amount of weight?

11:08:51 7 A Yes, they do.

11:08:52 8 Q Now, you say then that this doesn't work if the
11:08:55 9 sensitivity's needed. I want to move to the question of
11:08:59 10 whether or not, if this was commonly done in the '60s and
11:09:03 11 the '70s, I want to move to the issue of whether or not
11:09:08 12 anyone ever thought of doing something differently with
11:09:11 13 talc. You follow me?

11:09:13 14 A Yes.

11:09:14 15 Q In other words, would Johnson & Johnson, for
11:09:16 16 example, know better than to try to use something that works
11:09:20 17 for building products, when they're dealing with talc,
11:09:24 18 that's the issue?

11:09:26 19 MR. DUBIN: Objection, your Honor. As to
11:09:27 20 Johnson & Johnson's knowledge from this witness.

11:09:30 21 THE COURT: As to the phrasing of the
11:09:31 22 question, sustained.

11:09:34 23 MR. DUBIN: Argumentative.

11:09:36 24 Q (By Mr. Lanier) I want to look at different things
11:09:38 25 that were known in the academic community pertaining to this

11:09:41 1 issue. Fair?

11:09:43 2 A Fair.

11:09:43 3 Q And to do that, we need to talk about something
11:09:46 4 called the concentration method. You talked about how these
11:09:53 5 techniques work if it is concentrated and separated, if you
11:09:59 6 take the hay and get rid of all the hay, as much as you can,
11:10:04 7 then look for the needles, right?

11:10:06 8 A That is correct.

11:10:07 9 Q Okay. To keep this in our brain as being
11:10:12 10 different. We have an empty can, orange juice concentrate
11:10:16 11 to me is the most normal concentrate I can think of, right?

11:10:20 12 A Yes.

11:10:21 13 Q Do you know how orange juice concentrate is made
11:10:25 14 from orange juice?

11:10:27 15 A Yes.

11:10:28 16 Q Give us a clue so that we've got some place to
11:10:32 17 anchor this concept within our brain.

11:10:34 18 A Well, when you -- when you make it from the
11:10:37 19 concentrate, which you typically do, you add water so you're
11:10:41 20 removing a lot of the water which makes up a large portion
11:10:45 21 of orange juice. And then so to keep the pulp, the flavor,
11:10:50 22 there has to be some water in there so that you can freeze
11:10:53 23 it.

11:10:54 24 Now, if you're as old as me, you remember Tang. I
11:10:58 25 don't know if they still sell that, they take all of the

11:11:01 1 water out, doesn't taste as good as the concentrate. Went
11:11:06 2 to the moon.

11:11:08 3 Q That's right, Tang. It was tangy. It was bitter,
11:11:12 4 I mean, it had a sharper taste. So you get OJ, for an
11:11:17 5 example, as a concentrate. How do you concentrate or get
11:11:23 6 rid of the hay for this product?

11:11:30 7 A A simple way to -- if we look at that bale of hay
11:11:35 8 and we think about those needles in there, let's put that
11:11:39 9 bale of hay in something where the hay floats and the
11:11:42 10 needles go to the bottom. For that you could do it with
11:11:46 11 just water.

11:11:47 12 So if you were to mix that up in a big vat of
11:11:51 13 water, let it just sit there, and then at the bottom of that
11:11:55 14 vat you have a little something you could open up and take
11:11:58 15 the bottom out, there's where all your needles would be
11:12:02 16 because the needles will not float in water. The hay will.

11:12:06 17 The scientific reason for that is think of a sugar
11:12:09 18 cube, the size of a sugar cube. That sugar cube is
11:12:14 19 approximately 1 centimeter squared cubed, three sides.

11:12:20 20 The water waves has a density of 1 gram of weight
11:12:26 21 for that cubic centimeter, I believe. I hope I'm right on
11:12:29 22 that. I always miss the easy stuff.

11:12:32 23 Q We do have a taste scientist on the jury.

11:12:36 24 A I was thinking, okay, I hope I'm right on that.
11:12:38 25 So that hay, you go to squish it, unless it's got openings

11:12:44 1 in it so air can get in there. If I were to squish that
11:12:47 2 into cubic centimeters, it's going to weigh less than the
11:12:51 3 water so that's going to float, a cork. Those nails are
11:12:55 4 going to go right to the bottom so I can separate that out
11:12:59 5 by doing that.

11:13:00 6 In the talc, instead of using water, we call that
11:13:06 7 a heavy liquid. So it's got some other chemicals in it
11:13:11 8 that's made up of water so instead of weighing 1 gram per
11:13:13 9 cubic centimeter, in this case what we use weighs 2.85 grams
11:13:19 10 per cubic centimeter so it's heavy. They call it heavy
11:13:23 11 liquid.

11:13:24 12 The talc weighs 2.6 grams per cubic centimeter, so
11:13:28 13 it floats. The tremolite weighs 3.1 grams per cubic
11:13:33 14 centimeter, so it sinks. And we help that along by putting
11:13:37 15 in a centrifuge, you know, been in those -- those carnival
11:13:44 16 rides where you stand up against the wall, you spin around
11:13:48 17 and that wall drops? There's a reason you don't slide down
11:13:51 18 because the force is pushing you out.

11:13:54 19 When we use the centrifuge tube, we're using a
11:13:57 20 force to help drive what weighs more to the bottom of the
11:14:01 21 tube, and then the talc goes to the top. That's how we
11:14:04 22 concentrate, and we just take off that bottom of that test
11:14:08 23 tube to get the needles with a little bit of the hay like
11:14:11 24 you have on the floor.

11:14:12 25 Q Okay. Is this idea of concentrating by separation

11:14:17 1 something you dreamed up?

11:14:21 2 A No. If I did I would call it the Longo Separation
11:14:28 3 Method.

11:14:29 4 MR. LANIER: Your Honor, we would move into
11:14:31 5 evidence Dr. Blount's paper, Plaintiff's Exhibit 7580, the
11:14:37 6 Amphibole Content of Cosmetic and Pharmaceutical Talcs.

11:14:40 7 MR. DUBIN: No objection, your Honor.

11:14:43 8 THE COURT: Very well. 7580 will be
11:14:45 9 received.

11:14:46 10 MR. LANIER: Thank you, your Honor.

11:14:47 11 Q (By Mr. Lanier) Sir, I'll give you a copy of Dr.
11:14:49 12 Blount's paper. The jury got to meet Dr. Blount yesterday
11:14:54 13 in that deposition, the video deposition that we started out
11:14:57 14 with.

11:14:58 15 Have you ever met her individually?

11:15:00 16 A No, sir, I haven't had the honor.

11:15:02 17 Q I think she's in her 80s or something, but we got
11:15:06 18 to meet her through a deposition yesterday. She talked a
11:15:10 19 little bit about this publication that she did in 1991.

11:15:16 20 Have you read this publication?

11:15:17 21 A I have.

11:15:18 22 Q And this publication is one where she examined
11:15:27 23 pharmaceutical and cosmetic-grade talcs for asbestiform
11:15:34 24 amphibole content. In everyday language, what does that
11:15:40 25 mean?

11:15:40 1 A Asbestiform amphibole would be any of the
11:15:44 2 amphibole minerals. Here we're dealing with asbestos.

11:15:48 3 MR. DUBIN: Your Honor, I'm sorry. On the
11:15:49 4 exhibit, I didn't realize that he had put another page at
11:15:52 5 the end of the article that does not belong with the
11:15:56 6 article. I have no objection to the article, but an
11:15:58 7 additional handwritten page that I don't believe that the
11:16:03 8 foundation's been laid.

11:16:04 9 MR. LANIER: Your Honor, I specifically want
11:16:06 10 the handwritten page in. This is the way it was produced to
11:16:09 11 us by Johnson & Johnson. You'll see the Bates stamp number
11:16:12 12 at the bottom. This is Johnson & Johnson, and on the back I
11:16:14 13 produced the metadata from Johnson & Johnson, this is
11:16:18 14 original from them. Every one of these pages, including the
11:16:21 15 back page, page number 7.

11:16:24 16 MR. DUBIN: Your Honor, I don't think we
11:16:24 17 should be having an argument in front of the jury. We're
11:16:27 18 happy to approach if you'd like.

11:16:31 19 THE COURT: We touched on this last page
11:16:33 20 last. Let's take this up at the sidebar.

11:16:37 21 MR. DUBIN: Thank you.

11:16:38 22 (Counsel approached the bench, and the
11:16:38 23 following proceedings were had:)

11:19:40 24 THE COURT: Okay. So last week I had asked
11:19:41 25 who wrote this. And was anyone ever identified who wrote

11:19:42 1 this?

11:19:42 2 MR. LANIER: Yes, your Honor. We now can
11:19:43 3 identify it as being Johnson & Johnson's, we don't know who
11:19:44 4 within Johnson & Johnson, but it was produced to us by them.
11:19:45 5 It's attached in their files to their copy of Alice Blount's
11:19:47 6 memo. And so the Bates stamp numbers in the corner are the
11:19:48 7 Johnson & Johnson produced to us, so that we were produced
11:19:49 8 this entire document. And we've provided also for the Court
11:19:51 9 the metadata, which shows the custodian file that it was in
11:19:52 10 at Johnson & Johnson.

11:19:52 11 The date Johnson & Johnson set it up, which
11:19:53 12 they've got at 1991. That it was produced to us in a TIFF
11:19:54 13 form. It's got the Bates numbers attached and the file size
11:19:56 14 as part of the production. So this is just the way Johnson
11:19:57 15 & Johnson kept her article over the years.

11:19:58 16 MR. DUBIN: The fact that something's in your
11:19:59 17 files does not mean it's your document. It could have been
11:20:00 18 provided by any person. In order to lay a business records
11:20:02 19 foundation he has to do more than just establish it's in her
11:20:03 20 files.

11:20:03 21 For example, there's been testimony about people,
11:20:04 22 lawyers who have been involved in litigation with these
11:20:05 23 things, information that could have been provided by
11:20:06 24 anybody. Doesn't make it a business record just -- or an
11:20:07 25 admission to have an unauthenticated handwritten note in

11:20:09 1 your files.

11:20:09 2 MR. LANIER: With due respect, your Honor,
11:20:10 3 the way it was produced to us shows the date it was modified
11:20:11 4 as 1991. This is before any lawyers or anyone got involved
11:20:13 5 in this case. This clearly is part of their regular course
11:20:14 6 of business because that's what they produced it to us as.
11:20:15 7 Part of their regular course of business. This is one
11:20:16 8 reason that I think --

11:20:17 9 THE COURT: All right. So for what purpose
11:20:18 10 is this page?

11:20:18 11 MR. DUBIN: It was handwritten notation,
11:20:19 12 appears to be in different handwriting. Because like this,
11:20:20 13 and then the dash.

11:20:21 14 THE COURT: Okay. What I was asking, for
11:20:21 15 what purpose is this 07580 will be used with this witness?

11:20:23 16 MR. LANIER: To explain what the
11:20:24 17 concentration method is and that it's been used before, and
11:20:25 18 it was used in this test by Dr. Blount.

11:20:26 19 THE COURT: I'm going to overrule the
11:20:27 20 objection.

11:20:27 21 MR. DUBIN: Sorry?

11:20:28 22 THE COURT: Overrule the objection.

11:20:28 23 (The proceedings returned to open court.)

11:20:29 24 MR. LANIER: Thank you, your Honor. May I
11:20:29 25 continue?

11:20:29 1 THE COURT: Yes, sir.

11:20:30 2 Q (By Mr. Lanier) All right. Pharmaceutical and
11:20:30 3 cosmetic grade talcs were examined for asbestiform amphibole
11:20:32 4 content. Now, again, amphiboles -- asbestiform amphiboles,
11:20:33 5 that's the bad stuff; is that right?

11:20:34 6 A Asbestos amphiboles would be one of the regulated
11:20:35 7 asbestos fibers, bundles, fibers that we're dealing with
11:20:36 8 here. So tremolite, anthophyllite, are typically some form
11:20:37 9 of what we call the tremolite symmetry series. There's a
11:20:39 10 little bit of the change in the elements on the fiber
11:20:40 11 itself.

11:20:40 12 Q Okay. Using a new density-optical method, talc
11:20:44 13 under the FDA are not regulated as to asbestos content,
11:20:48 14 however, all talcs are well below the level mandated by the
11:20:52 15 Occupational Safety and Health Administration for industrial
11:20:55 16 talcs. Only one was found to contain an amphibole particle
11:21:00 17 size distribution typical of asbestos. Right?

11:21:06 18 A That's what it states.

11:21:07 19 Q Now, the technique that she's got, this new
11:21:12 20 density-optical method. Can you describe to the jury
11:21:19 21 generally what she did?

11:21:22 22 A Well, she concentrated the needles. In this case
11:21:28 23 the asbestos, if present at the bottom of the test tube,
11:21:32 24 using this heavy liquid that we talked about, and got the
11:21:36 25 talc out of the way. Then she used a polarized light

11:21:41 1 microscope to look at what she concentrated, that's what
11:21:44 2 sort of make it new. It's heavy density liquid separation
11:21:48 3 of minerals like this, not just for asbestos, it's been done
11:21:52 4 for years.

11:21:52 5 If you get -- it's done in mining operations where
11:21:56 6 you use floatation, have stuff that will attach bubbles to
11:22:01 7 one type of mineral and separate it out. It's more
11:22:03 8 efficient, so it's a technique that's been around for a
11:22:06 9 while, but she kind of used it specifically for talc and
11:22:11 10 optical microscopy.

11:22:12 11 Q Did the FDA, at some point in time, to the best of
11:22:15 12 your knowledge, actually consider the idea of using
11:22:20 13 separation and isolation?

11:22:23 14 A Yes.

11:22:24 15 MR. LANIER: Your Honor, at this point we'd
11:22:25 16 move into evidence Plaintiffs' Exhibit 6824.

11:22:30 17 MR. DUBIN: No objection, your Honor.

11:22:31 18 THE COURT: Very well. Plaintiffs' 6824 will
11:22:34 19 be received. Thank you.

11:22:36 20 MR. LANIER: Uh-huh.

11:22:37 21 Q (By Mr. Lanier) I'd like to show this to the jury
11:22:41 22 and get your discussion about it. First of all, do you have
11:22:44 23 Plaintiffs' Exhibit 6824 in front of you?

11:22:49 24 A Yes, sir.

11:22:51 25 Q And are you able to see on Plaintiffs' 6824, that

11:22:55 1 we're dealing with a document that is Johnson & Johnson?

11:22:59 2 A Yes, sir.

11:22:59 3 Q And we're going back now into the 1960s, 25 years
11:23:06 4 before Dr. Blount did her test and wrote it up; is that
11:23:11 5 right?

11:23:12 6 A That is correct.

11:23:15 7 Q No, it's 15 years. That was a test.

11:23:19 8 A See there.

11:23:20 9 Q Yeah, it's 15 years. My mistake.

11:23:23 10 A My mistake for agreeing with you.

11:23:25 11 Q It's true. All right. Fifteen years before Dr.

11:23:28 12 Blount we've got this, Johnson & Johnson. And it's written
11:23:32 13 by Mr. Ashton. You've seen his name in reference to a lot
11:23:35 14 of these talc/asbestos issues, fair?

11:23:38 15 A That's fair.

11:23:39 16 Q Written to George Lee, Johnson & Johnson Baby
11:23:44 17 Products Company. Attached is a copy of a disturbing
11:23:49 18 proposal. Do you see where I'm reading?

11:23:53 19 A Yes, sir.

11:23:53 20 Q A disturbing proposal request, which the FDA has
11:23:57 21 currently made available to qualified bidders. The scope of
11:24:02 22 the work is the separation of asbestos in foods, drugs and
11:24:09 23 talc for identification and determination. Do you see that?

11:24:13 24 A Yes, sir.

11:24:14 25 Q As a practical matter, if there is no asbestos and

11:24:17 1 never has been asbestos in the history of humanity in talc,
11:24:20 2 why would they be trying to separate it for identification
11:24:25 3 and determination?

11:24:27 4 MR. DUBIN: Objection. Argument.

11:24:28 5 THE COURT: Sustained.

11:24:29 6 Q (By Mr. Lanier) I find this proposal more
11:24:32 7 disturbing than other proposals up to now because it aims at
11:24:37 8 separation and isolation of asbestos from a wide scope of
11:24:42 9 products and animal tissues.

11:24:49 10 A That's what it states.

11:24:51 11 Q Now, did you do a separation and isolation test
11:24:56 12 yourself?

11:24:56 13 A Yes, sir.

11:24:57 14 Q Is that what this concentration method is?

11:24:59 15 A It is.

11:25:00 16 Q And so in 1976, Johnson & Johnson continues to
11:25:04 17 say, up to now, our main problems have had to do with
11:25:11 18 identification, where's -- now it looks like the FDA is
11:25:15 19 getting into separation and isolation methodology, which
11:25:22 20 will mean concentration procedures.

11:25:28 21 Again, something you did, right?

11:25:31 22 A Yes, sir.

11:25:32 23 Q Being written up as something Johnson & Johnson is
11:25:35 24 aware of in 1976?

11:25:38 25 A That's how I interpret this document.

11:25:42 1 Q The Johnson & Johnson man continues: As I have
11:25:45 2 pointed out many times, there are many talcs on all markets
11:25:53 3 which will be hard pressed in supporting purity claims.
11:26:00 4 When ultrasophisticated assay separation and isolation
11:26:07 5 techniques are applied. Do you see that?

11:26:10 6 A Yes, sir, I do.

11:26:12 7 Q What does this mean, ultrasophisticated assay
11:26:17 8 separation? I don't know what assay is.

11:26:19 9 A Assay is a scientific term. It's a particular
11:26:22 10 type of test. An assay of six reagents, three of them
11:26:27 11 worked, three of them didn't sort of thing.

11:26:30 12 Q So this gentleman says there are many talcs on all
11:26:35 13 markets which will be hard pressed in supporting claims that
11:26:39 14 they're pure when this ultrasophisticated assay separation
11:26:45 15 and isolation techniques are applied. Are those the
11:26:49 16 techniques that you used?

11:26:51 17 A We did an isolation concentration method that we
11:26:56 18 discussed, yes.

11:26:57 19 Q Chances are that this FDA proposal will open up
11:27:00 20 new problem areas with asbestos and talc minerals. Do you
11:27:06 21 see that?

11:27:07 22 A Yes, sir, I do.

11:27:10 23 Q He talks about how he's going to keep tuned in.
11:27:13 24 Now, sir, within the context of this entire document, if
11:27:18 25 Johnson & Johnson was aware in 1976 of these procedures, do

11:27:25 1 you believe the equipment existed to do this work?

11:27:29 2 A Yes.

11:27:33 3 Q If someone really wanted to test their asbestos,
11:27:37 4 just -- their talc to see if it had asbestos in it, the
11:27:42 5 techniques that you're talking about, this sensitivity, did
11:27:48 6 it exist in the knowledge of Johnson & Johnson, according to
11:27:53 7 Exhibit 6824, back in 1976?

11:27:59 8 A I'm just looking at something real quick, I can
11:28:01 9 probably give you an example. Yes. The heavy density
11:28:19 10 liquid separation goes back years. It's common. Other
11:28:25 11 folks have done it earlier than this in 1990. So it's a
11:28:30 12 common technique to separate minerals that have different
11:28:34 13 densities, meaning some float better than others, as soon as
11:28:38 14 you figure that out you can then change that so you get the
11:28:41 15 ones that sink, that you want to collect, or you can collect
11:28:45 16 them off the top if they float, either way.

11:28:48 17 Q Okay. Now, in this regard, Mr. Bicks told this
11:28:53 18 jury in his opening, he said that Johnson & Johnson's talc
11:29:00 19 is tested at every step. Do you see that?

11:29:06 20 A Yes, sir.

11:29:09 21 Q Selecting a mine, mining, processing at the mill,
11:29:12 22 washing and floating. Within the framework of that, each
11:29:19 23 step needs the right test, fair?

11:29:22 24 A That's fair.

11:29:25 25 Q Now, consider this, please. Not 1976, but let's

11:29:32 1 go back in time to 1973.

11:29:38 2 MR. LANIER: Your Honor, I'll move into
11:29:39 3 evidence Plaintiffs' Exhibit 51.

11:29:52 4 MR. DUBIN: No objection, your Honor.

11:29:53 5 THE COURT: All right. Plaintiffs' 51 will
11:29:55 6 be received.

11:30:03 7 Q (By Mr. Lanier) Now, if we look at Plaintiffs'
11:30:04 8 Exhibit Number 51. Here are some proposed specifications
11:30:11 9 for analyzing talc for asbestos. Do you see that?

11:30:15 10 A Yes.

11:30:16 11 Q And we've got this on Johnson & Johnson
11:30:18 12 letterhead. Now we're back in 1973.

11:30:24 13 A Yes.

11:30:24 14 Q So we're now 18 years before?

11:30:35 15 A You are correct.

11:30:36 16 Q All right. Before Dr. Blount. And Mr. Shelley
11:30:41 17 within Johnson & Johnson -- and this is big Johnson &
11:30:45 18 Johnson -- oops. Says to a Dr. Rolle at Johnson & Johnson,
11:30:53 19 I'm going to England May 25. I have been asked to bring
11:30:57 20 along our proposed specs for analyzing talc for asbestos.
11:31:02 21 England is considering method of pre-concentrating the
11:31:07 22 asbestos so as to be able to analyze it by X-ray. Do you
11:31:13 23 see that?

11:31:14 24 A Yes.

11:31:15 25 Q Is that exactly what Alice Blount did 18 years

11:31:23 1 later?

11:31:25 2 A Sort of. She pre-concentrated it, but instead of
11:31:29 3 using X-ray or XRD, she used polarized light microscopy.

11:31:35 4 Q All right. So Dr. Blount did it with polarized
11:31:38 5 light microscopy. Same technique?

11:31:43 6 A Yes, sir.

11:31:45 7 Q They find no asbestos by doing this with Italian
11:31:51 8 talc. They find Pooley, .05 percent of a tremolite type in
11:32:01 9 Vermont. Do you see that?

11:32:03 10 A Yes, sir.

11:32:04 11 Q Now, this is where Mr. Bicks told the jury that
11:32:09 12 Dr. Pooley said there was no asbestos in Vermont talc. They
11:32:19 13 used Dr. Pooley in 1972 to tell the jury, as opposed to this
11:32:24 14 1973 document where the same fella said, according to
11:32:30 15 Johnson & Johnson, they find tremolite type asbestos in
11:32:33 16 Vermont. Do you see that?

11:32:36 17 A I would say that's what that means. They say
11:32:38 18 they'd find no asbestos in the Italian talc, and then the
11:32:42 19 tremolite type in the Vermont, 0.05 percent, which by XRD
11:32:49 20 you would have to concentrate the sample because XRD does
11:32:53 21 not have that analytical sensitivity to get to .05 percent
11:32:59 22 for tremolite. So that's below the resolution of the
11:33:04 23 system, or the method. Especially in 1972.

11:33:07 24 Q All right. And then in the same year of 1973, I
11:33:10 25 want --

11:33:12 1 A '73, I'm sorry.

11:33:13 2 Q I want to go back one more month now and look at
11:33:16 3 what the company was thinking or writing up in April of '73.

11:33:20 4 MR. LANIER: So, your Honor, I move into
11:33:21 5 evidence Plaintiffs' Exhibit Number 40, at this point in
11:33:26 6 time.

11:33:32 7 MR. DUBIN: No objection, your Honor.

11:33:33 8 THE COURT: Plaintiffs' 40 will be received.

11:33:35 9 MR. LANIER: Thank you, Judge.

11:33:40 10 Q (By Mr. Lanier) Again, still talking about the
11:33:42 11 concentration method. Okay.

11:33:46 12 A Yes, sir.

11:33:48 13 Q Johnson & Johnson Baby Products, April 1973. This
11:33:56 14 is talking about Windsor Minerals and talc. Can you confirm
11:34:02 15 Windsor Minerals is Vermont talc that was used in the baby
11:34:05 16 powder?

11:34:07 17 A It is.

11:34:08 18 Q Bill Ashton and I -- Bill Ashton was the one who
11:34:12 19 wrote that earlier document we looked at, I believe?

11:34:17 20 A Yes, sir.

11:34:18 21 Q All right. Bill Ashton and I visited with Roger
11:34:23 22 Miller and Vernon Zeitz on April 18th. We covered a number
11:34:30 23 of points of considerable concern. Do you see that?

11:34:34 24 A Yes, sir.

11:34:36 25 Q It is our joint conclusion we should not rely on

11:34:42 1 the "clean mine" approach. As a protective device for baby
11:34:48 2 powder in the current asbestos or asbestiform controversy.
11:34:55 3 We believe this mine to be very clean, however -- do you see
11:35:01 4 the however?

11:35:01 5 A Yes, sir.

11:35:02 6 Q We are also confident that fiber forming or fiber
11:35:08 7 type materials could be found. The usefulness of the "clean
11:35:14 8 mine" approach for asbestos only is over. Do you see that?

11:35:22 9 A Yes, sir.

11:35:23 10 Q Now, Mr. Bicks tried to clean mine approach to
11:35:26 11 this jury. He tried to say that they select clean mines --

11:35:33 12 MR. DUBIN: Objection. This is all just
11:35:36 13 argument. He can ask questions without arguing.

11:35:40 14 THE COURT: Overruled.

11:35:41 15 Q (By Mr. Lanier) That they selected clean mines
11:35:43 16 that they tested every hour, hundreds of thousands of tests,
11:35:47 17 or over a hundred thousand, on this mining process, trying
11:35:52 18 to say that there's never been any asbestos found in any
11:35:58 19 mine in Vermont. Do you remember that?

11:36:00 20 A I do.

11:36:02 21 Q The company, in 1973, when they're writing this
11:36:06 22 idea of the "clean mine" approach for asbestos only is over,
11:36:13 23 would you agree with the company?

11:36:16 24 A I can't -- I can't know what the company is
11:36:20 25 thinking here, but I've seen the documents and analysis, and

11:36:23 1 asbestos has been found in the Vermont mines.

11:36:26 2 Q Once, twice?

11:36:28 3 A I don't know how many times, but it's been found
11:36:32 4 through the years.

11:36:35 5 Q We've already got Pooley finding it with a
11:36:38 6 concentration method?

11:36:39 7 A Yes, sir.

11:36:40 8 Q That we looked at, right? It is possible that the
11:36:45 9 technique of identification for asbestos or asbestos form
11:36:47 10 materials will be an optical approach. It will probably be
11:36:54 11 some variation of the McCrone method. This method, with
11:36:59 12 appropriate concentrating techniques, will permit a good
11:37:06 13 laboratory to identify asbestos or tremolite in a talc
11:37:11 14 sample?

11:37:12 15 A Yes, sir.

11:37:13 16 Q This is the exact method that Alice Blount would
11:37:16 17 use, what, 17 years later, 18 years later?

11:37:20 18 A Yes, sir. That's basically what she did. She
11:37:23 19 concentrated it. When they say optical method, they're
11:37:27 20 really saying polarized light microscopy, which is a good
11:37:29 21 method. So they're saying this is what could be done for a
11:37:36 22 good lab to find asbestos.

11:37:38 23 Q They're saying if they use polarized light
11:37:40 24 microscopy with concentration and separation, that a good
11:37:47 25 lab will be able to identify asbestos or tremolite in a talc

11:37:52 1 sample?

11:37:53 2 A That's what it states.

11:37:55 3 Q Do you have a good lab?

11:37:58 4 A I would hope so, yes, I believe we have a good
11:38:01 5 lab.

11:38:02 6 Q Did you use appropriate concentrating techniques?

11:38:05 7 A Yes, sir, we did.

11:38:06 8 Q Were you able to identify asbestos and tremolite
11:38:11 9 asbestos in a talc sample?

11:38:13 10 A Yes, sir.

11:38:13 11 Q In a talc sample of Johnson & Johnson, even after
11:38:18 12 all of this and the final bottling product?

11:38:23 13 A Yes.

11:38:26 14 Q If you continue to look through this document,
11:38:28 15 you'll see on the second page something I want to draw
11:38:33 16 attention to real quick.

11:38:36 17 It's talking about baby powder under point B. Do
11:38:41 18 you see that?

11:38:42 19 A Yes.

11:38:44 20 Q As for baby powder. The entire thrust of our
11:38:50 21 communications with the FDA has concentrated on asbestos as
11:38:55 22 a harmful fiber-like material. Sophisticated techniques
11:39:02 23 have been proposed to make sure that fiber form materials
11:39:05 24 present in samples were identified as being asbestos.

11:39:10 25 The implication is that all other fiber forms, if

11:39:13 1 present, were talc or other minerals and these were safe.

11:39:19 2 This posture will no longer be satisfactory. Do you see
11:39:25 3 that?

11:39:25 4 A Yes, sir, I do.

11:39:26 5 Q If the FDA food division, that's the food
11:39:30 6 division --

11:39:32 7 A Yes.

11:39:32 8 Q Not the baby powder division, or the cosmetic
11:39:36 9 division, which is moving more rapidly than the cosmetic
11:39:42 10 division, publishes a standard, if they do, it will probably
11:39:47 11 be to ban asbestos form or fibrous material in talc.

11:39:52 12 Now, sir, I pose this question for a moment. If
11:39:56 13 there's no asbestos in talc and there's never been any
11:39:59 14 asbestos in talc, why would banning asbestos in talc make a
11:40:02 15 difference?

11:40:03 16 MR. DUBIN: Your Honor, again, objection.
11:40:04 17 It's an argumentative question.

11:40:06 18 THE COURT: Overruled.

11:40:09 19 A It wouldn't make any sense if you didn't have
11:40:12 20 anything there, any asbestos present, then why are you
11:40:16 21 worried about somebody saying you can't have any in there.

11:40:20 22 Q (By Mr. Lanier) That could eliminate the current
11:40:22 23 uses of talc in packaging materials. These talcs contain
11:40:28 24 widely varying amounts of tremolite or fibrous talc. Our
11:40:34 25 baby powder contains talc fragments classifiable as fiber.

11:40:43 1 Did you see asbestos fibers in there?

11:40:46 2 A Yes.

11:40:47 3 Q Occasionally, sub-trace quantities of tremolite or
11:40:51 4 actinolite are identifiable, optical microscope, and these
11:40:56 5 might be classified as asbestos fiber. I mean, are fibrous
11:41:02 6 actinolite and tremolite asbestos fibers?

11:41:05 7 A They are.

11:41:07 8 Q So when Mr. Bicks tells the jury no one's ever
11:41:10 9 found any in any baby powder, any Vermont, only the
11:41:13 10 plaintiffs' experts, sir, were your findings any different
11:41:18 11 than what Johnson & Johnson had found and written up way
11:41:21 12 back in April of 1973?

11:41:26 13 A No. For the samples that we found were positive
11:41:30 14 for asbestos, we found it. It's there.

11:41:43 15 Q All right. There's one more aspect of the -- one
11:41:48 16 more stop on Rigged Test Road that I want to cover with you,
11:41:53 17 and I know we've covered a lot. But I want to talk a little
11:41:56 18 bit for just a few moments about the TEM work that is done
11:42:03 19 by the company. Okay?

11:42:05 20 A Yes, sir.

11:42:06 21 Q So the company does -- if they find no asbestos in
11:42:10 22 X-ray, they just quit, according to the flowchart?

11:42:14 23 A According to the flowchart.

11:42:17 24 Q And maybe they do it differently at times, I don't
11:42:19 25 want to get into that with you. If they can, super if they

11:42:23 1 do.

11:42:26 2 Polarized light microscopy. If they continue past
11:42:31 3 there and they actually get to trying to find the needle by
11:42:35 4 using the small scales, the TEM, are you with me?

11:42:39 5 A Yes, I am.

11:42:40 6 Q Do they even do that thoroughly?

11:42:45 7 A They run the technique that a lot of folks would
11:42:48 8 run. Except their analytical sensitivity is not, is not
11:42:55 9 very good. It allows them to really understand if they have
11:42:59 10 these trace amounts or not. Because they're not using a
11:43:03 11 concentration method, or if you don't use a concentration
11:43:07 12 method, scientists before this technique, before the
11:43:12 13 concentration technique and TEM, they were just looking at a
11:43:16 14 whole bunch more air, the grid openings, you'll hear over
11:43:20 15 and over here today that big transmission electron
11:43:24 16 microscope, the biggest sample we can put in there fits on a
11:43:28 17 33 millimeter circle, we call it a grid.

11:43:32 18 I think we have some pictures of it somewhere that
11:43:34 19 might be helpful. And what it looks like is a very
11:43:38 20 sophisticated small screen, and the grid openings are the
11:43:42 21 holes in this small screen. So, normally an analysis where
11:43:48 22 it's an asbestos product and you're measuring, you may look
11:43:52 23 at 20 to 40 grid openings.

11:43:55 24 If you don't use the concentration method, you get
11:43:58 25 the analytical sensitivity, instead of looking at 20 or 40

11:44:03 1 or 10 grid openings, you need to look up to a thousand grid
11:44:07 2 openings. And that takes a long time.

11:44:10 3 Q Ms. Cooper has handed me a note. She's right.
11:44:15 4 Just to be clear, both to the jury, the judge and the
11:44:17 5 record.

11:44:18 6 These are tests that we're talking about that
11:44:20 7 they're doing on the powder for the babies; is that right?

11:44:24 8 A Yes.

11:44:24 9 Q Or the adults that might want to use Johnson &
11:44:27 10 Johnson Baby Powder, correct?

11:44:28 11 A That's correct. Or they -- out of the mine before
11:44:30 12 it goes to the container.

11:44:32 13 Q All right. Now, have you -- this whole area is
11:44:36 14 one that needs some explanation, and so we're going to run
11:44:42 15 out of room. We're going to go to a clean sheet for a
11:44:45 16 moment because I want to make sure that we understand this.

11:44:48 17 What does it mean to talk about sensitivity,
11:44:52 18 especially when we're talking about grid openings?

11:45:00 19 A Analytical sensitivity is what is the
11:45:04 20 concentration of asbestos fibers that needs to be in the
11:45:07 21 talc. And, say, we're looking at Johnson & Johnson Baby
11:45:10 22 Powder. You take a small sample out of that container. How
11:45:16 23 much asbestos fibers or bundles has to be in there for me to
11:45:21 24 actually find one fiber or bundle of asbestos, because I'm
11:45:27 25 taking a small sample out of the container, so it's got to

11:45:30 1 have a certain concentration before I can detect, it's
11:45:34 2 called analytical sensitivity.

11:45:37 3 No chemist that's worth his salt can ever say
11:45:43 4 there's nothing there. I looked in the water for lead and
11:45:46 5 we didn't find any so I can now certify that this water is
11:45:50 6 lead-free. Can't say that in the scientific communities.
11:45:54 7 What you can say is my analytical sensitivity was one
11:45:59 8 microgram of lead per liter of water. I didn't find
11:46:04 9 anything.

11:46:05 10 All I can say is I can't say it's not there, I
11:46:07 11 can't say it's there. All I can say is if it's there, it
11:46:13 12 has to be less than one microgram of lead per gallon of
11:46:19 13 water. That's the analytical sensitivity. How much has to
11:46:23 14 be there before you get a positive test. Does that make
11:46:26 15 sense?

11:46:27 16 Q Yeah, I think it does. Let me just use it with
11:46:30 17 scales. So if this scale, bathroom scale is good to .0.0
11:46:37 18 pounds, so it will do maybe a tenth of a --

11:46:42 19 A Tenth of a pound, it should. That would probably
11:46:45 20 be pushing it, just because that extra zero's there doesn't
11:46:50 21 mean it will go to a tenth of a pound.

11:46:52 22 Q So we've got some measure of sensitivity which
11:46:56 23 will tell us if something's on here if it weighs enough,
11:47:02 24 right?

11:47:02 25 A Right.

11:47:03 1 Q Okay. Now the other scale that we use, the
11:47:08 2 jeweler's scale, even itself has some measure of
11:47:14 3 sensitivity, doesn't it?

11:47:15 4 A Yes.

11:47:19 5 Q That did not help?

11:47:20 6 A No, it did not.

11:47:23 7 Q Okay. It's still got some measure of sensitivity,
11:47:29 8 let's forget that. There we go.

11:47:37 9 A So it has three centimeter figures it looks like,
11:47:43 10 so it should be sensitive down to tenths, hundredths,
11:47:47 11 maybe -- hundreds to thousandths of a gram.

11:47:51 12 Q Yeah. I put a little thing on it, but it --

11:47:54 13 A 0.11 grams. So that's, you know, that's 11
11:47:58 14 milligrams.

11:47:59 15 Q That doesn't mean that it's -- it will weigh
11:48:03 16 everything, does it?

11:48:04 17 A No, sir. It's, at some point even that scale
11:48:07 18 cannot weigh everything. It will just show the zero because
11:48:15 19 it's past -- the weight of it is below the sampling of
11:48:18 20 sensitivity.

11:48:19 21 Q So we take this scale -- let's zero it out. Open
11:48:23 22 it up. All right. It shows zero. Can you sort of make out
11:48:32 23 that zero, or is it too hard to see?

11:48:35 24 A 0.000.

11:48:37 25 Q All right. We did it with a pin, but what we

11:48:42 1 didn't do with -- this has been sticking up anyway -- hair.

11:48:46 2 So we can take just one small little hair, didn't detect

11:48:55 3 that, did it?

11:48:56 4 A No.

11:48:56 5 Q Now, that doesn't mean there's not hair on there,
11:48:59 6 does it?

11:49:01 7 A No, of course not.

11:49:01 8 Q Explain to us what it means.

11:49:03 9 A It means that hair weighs less than the analytical
11:49:07 10 sensitivity of that scale. So now you have to get into
11:49:12 11 another generation of scales, and we even have it at our
11:49:16 12 labs that will weigh micrograms, and it's in a container you
11:49:18 13 can't have vibration, you can't have air getting on it.

11:49:23 14 We have tables that these things set on that even
11:49:26 15 with these specially designed tables, you can jump up and
11:49:30 16 down and you can watch that scale move because it will
11:49:33 17 measure that vibration come through. If you really want to
11:49:37 18 make one of the lab techs mad you do that on the other side
11:49:40 19 of the rule. Now, we have a rule against that because
11:49:43 20 sometimes these samples are irreplaceable.

11:49:46 21 Q Now, have you done a check to see how sensitive
11:49:49 22 the work that is done by the company is even under their
11:49:57 23 transmission electron microscope?

11:49:58 24 A I have.

11:49:59 25 Q And have you done those calculations in such a way

11:50:02 1 that we're able to talk about them to the jury?

11:50:06 2 A I believe so, yes, sir.

11:50:09 3 Q So some of this pertains to grid openings. Let's
11:50:14 4 get to the grid openings real quick. Explain to the jury
11:50:19 5 again what a grid is, and let's -- you said I need to put a
11:50:25 6 picture up.

11:50:26 7 MR. LANIER: Your Honor, for demonstrative
11:50:27 8 purposes, I would offer Plaintiffs' Exhibit Number 8215.

11:50:36 9 MR. DUBIN: No objection to the use as
11:50:38 10 demonstrative.

11:50:39 11 THE COURT: Very well. Will be received for
11:50:42 12 that purpose.

11:50:44 13 MR. LANIER: Thank you, Judge.

11:50:45 14 Q (By Mr. Lanier) Okay. Tell the jury what we're
11:50:47 15 looking at here at 8215.

11:50:53 16 A This is a high -- not high magnification, but this
11:51:00 17 is an increased magnification photograph of a typical TEM,
11:51:06 18 transmission electron microscopy, grid. This is what the
11:51:08 19 sample has to go on given that big microscope. And our
11:51:12 20 optical microscope we use here to calibrate it, we can
11:51:18 21 measure distances. So the distance from one end of that
11:51:21 22 grid to the other is just 3 millimeters in size. So about
11:51:25 23 yea big.

11:51:26 24 Now, you can see how these nice squares on there
11:51:29 25 and then we have numbers going on -- going, you know, up and

11:51:34 1 down from one to 10 and then A, B, C to J. So when we do an
11:51:41 2 analysis and we find an asbestos fiber, the analyst can go,
11:51:45 3 well, it's in grid number A4. So we can always keep track
11:51:50 4 of where it is. So when we do an analysis, we prepare the
11:51:58 5 sample to go on that grid.

11:52:01 6 Now, collect the TEM samples, all TEM samples are
11:52:06 7 collected. They come in different forms. You get an air
11:52:09 8 sample collected on a filter. You get a water sample
11:52:12 9 collected on a filter. Get a tissue sample, you eventually
11:52:16 10 collect it on a filter. So they all can be different, but
11:52:20 11 to get on this filter, then it's all the same after that,
11:52:24 12 and you analyze it.

11:52:25 13 You can't put that filter on the grid. It's too
11:52:28 14 thick. Electrons can't get through it. So there's a trick
11:52:32 15 to it. It's an actual analysis. Think of putting down a
11:52:37 16 very thin layer of carbon on top of that filter like Saran
11:52:42 17 wrap, but that Saran wrap down, and then you dissolve that
11:52:48 18 filter out from behind it, and that carbon Saran wrap holds
11:52:52 19 all those fibers in there. That way we can have it all on a
11:52:56 20 grid, and it's a very thin sample held together by 100 atoms
11:53:00 21 of carbon stacked up. That's how we get it on there. Did
11:53:06 22 that make sense?

11:53:08 23 Q Sort of. It does make sense, thank you. You're
11:53:11 24 looking for asbestos fibers in this fancy electron
11:53:20 25 microscope. You've got 10 grid openings going up and 10

11:53:24 1 going down, so that's 10 times 10, you've got a 100?

11:53:30 2 A Per grid opening.

11:53:32 3 Q For every grid openings.

11:53:34 4 A For every grid you have 100 openings.

11:53:35 5 Q Got it. 100 openings for every grid. Do you look
11:53:38 6 at them all?

11:53:39 7 A Yes, but not on one grid. We split it up between
11:53:43 8 two grids. So we look at 100 openings for our analysis when
11:53:47 9 we do this. So we pick 50 on one and 50 on the second grid.
11:53:53 10 That gives us -- that gives us 100 openings.

11:53:59 11 Q So 100 openings, 50 per grid.

11:54:03 12 A Approximately, yes, sir.

11:54:08 13 Q Oh. How about the experts that you've looked at
11:54:14 14 that were doing this work for Johnson & Johnson. Would they
11:54:18 15 look at 100 openings each time?

11:54:21 16 A No.

11:54:23 17 Q Tell the jury how many they would look at.

11:54:26 18 A Depending who was doing it. Anywhere from 10 to
11:54:29 19 20 openings. And the highest I've seen is 35 openings
11:54:35 20 without the concentration method.

11:54:39 21 Q So this is even -- you look at 50, you look at 100
11:54:43 22 openings?

11:54:44 23 A Yes, sir.

11:54:46 24 Q With already having concentrated it, taken out all
11:54:51 25 of the chad?

11:54:54 1 A The talc. The talc plates. We try to remove as
11:54:57 2 much of the talc plates that are in the sample as we can, so
11:55:02 3 that we're not -- because in TEM -- say this is a talc
11:55:10 4 plate. If I have it in there in my TEM I can pretty much
11:55:15 5 see through it, it's very thin. But if I start getting more
11:55:18 6 and more of those talc plates in there, all of a sudden I
11:55:24 7 can't see my fiber, and those openings are completely
11:55:28 8 covered up with talc plate, plate after talc plate, so you
11:55:31 9 have to dilute the samples a lot.

11:55:34 10 And I've used this before. Say you're looking for
11:55:39 11 the meatballs in spaghetti. You don't have any meatballs in
11:55:44 12 there and you got a big pile of spaghetti.

11:55:48 13 Q It's a little close to lunch to be using this
11:55:50 14 analogy.

11:55:51 15 A That's why I'm doing it because I'm hungry.

11:55:54 16 Q All right. Keep going.

11:55:54 17 A How many meatballs are in there? You can't touch
11:55:57 18 that spaghetti, or you can't tell. Now you can do one of
11:56:00 19 two things. You can concentrate it so it's only meatballs,
11:56:04 20 eat all the spaghetti and go, okay, I have six meatballs
11:56:08 21 left. Or you can take that bowl of spaghetti with the
11:56:09 22 meatballs and lay it out on a big table so those spaghetti
11:56:15 23 noodles are not on top of each other, but you're going to
11:56:18 24 have to look over the whole table to count how many
11:56:22 25 meatballs are in there.

11:56:23 1 And that's what you have to do if you don't
11:56:25 2 concentrate this method. You have to spread it out and
11:56:28 3 dilute it so now if you want to get the same kind of
11:56:34 4 sensitivities that we're getting, instead of 100 grid
11:56:37 5 openings, you might have to go to a thousand grid openings.

11:56:41 6 Q So what you're saying is, is to make this
11:56:43 7 illustration with the hay, what I really need to do is count
11:56:47 8 how many needles it was by their method, go ahead and spread
11:56:52 9 the hay out all over the floor, that would get me in bad
11:56:55 10 trouble, so we'll just say it and not do it.

11:56:59 11 A I swear I thought you were going to do it.

11:57:03 12 Q I don't want the judge to throw me out. I mean,
11:57:06 13 they should -- and then they don't concentrate and then they
11:57:11 14 cut down on the number they look at. They look at less?

11:57:15 15 A Well, no. It's standard -- they're not doing --
11:57:18 16 if the sample is not these trace samples where you have so
11:57:22 17 little, so little of the asbestos fibers as compared to what
11:57:27 18 else is in there, these are standard methods; 10, 20 grid
11:57:31 19 openings. As long as you have a sample you're looking at
11:57:34 20 that has a lot of asbestos in it, we're dealing with a lot
11:57:38 21 of times samples that have 10 percent, 15 percent,
11:57:42 22 20 percent asbestos.

11:57:43 23 What we're talking about, hundreds and hundreds of
11:57:46 24 times less than that. So it becomes a problem. There's
11:57:50 25 nothing wrong with 10, there's nothing wrong with

11:57:53 1 transmission electron microscopy. It is the best method out
11:57:58 2 there.

11:57:58 3 I'm an electron microscopist. You just have to
11:58:01 4 know the strength and weaknesses, and you have to know what
11:58:05 5 it can tell you based on what you're using in there and your
11:58:09 6 sensitivity. That's the only issue I come up with. The
11:58:12 7 microscope is a great microscope.

11:58:14 8 Q So if Johnson & Johnson's experts aren't looking
11:58:17 9 at 100 openings, they're not concentrating, is their method
11:58:22 10 as sensitive, will they be able to find the needles as
11:58:27 11 readily as your approach, or that of Blount, or that of
11:58:31 12 Pooley, that of the FDA, that was written up in those
11:58:34 13 earlier documents?

11:58:36 14 A No, it makes it a lot more difficult. You have to
11:58:39 15 dilute the sample so you don't get too much talc in there.
11:58:43 16 So they're starting with a lot less weight of sample than we
11:58:47 17 are. We're using 25 milligrams, which is not a lot. You
11:58:52 18 know, their analysts are using a tenth of a milligram or so.
11:58:58 19 Because they can't -- they can't overload the filter.
11:59:03 20 Because they're not getting rid of the talc. Too much talc
11:59:05 21 in there, if you don't dilute it, spread it all out, you're
11:59:09 22 going to overload the sample and you can't analyze it.

11:59:12 23 Q Okay.

11:59:13 24 MR. LANIER: Your Honor, at this point, just
11:59:14 25 to give a sample, I've got a demonstrative of Plaintiffs'

11:59:19 1 4633, which is the mathematics that have been worked out by
11:59:26 2 the expert, Dr. Longo, to explain the sensitivity conclusion
11:59:31 3 he's got. I don't want to walk through all of the math, but
11:59:35 4 I want to make sure --

11:59:37 5 MR. DUBIN: For demonstrative purposes, no
11:59:38 6 objection.

11:59:38 7 THE COURT: Will be received for that
11:59:40 8 purpose.

11:59:40 9 MR. LANIER: Thank you, Judge.

11:59:42 10 Q (By Mr. Lanier) So you've actually taken a Johnson
11:59:44 11 & Johnson TEM method and walked through all of the math
11:59:48 12 necessary?

11:59:51 13 A Yes.

11:59:55 14 Q And then come to the conclusion of how much
11:59:59 15 asbestos fiber per gram that could be there that Johnson &
12:00:04 16 Johnson would never be able to find, or report?

12:00:14 17 A Yes and no.

12:00:15 18 Q Okay. Explain to us -- before we look at the
12:00:17 19 numbers, explain to us what this means -- come on focus,
12:00:26 20 there we go. Explain to us what it means.

12:00:29 21 A So, I did the calculation based on their protocol,
12:00:34 22 their recipe, this is what they said how much they start
12:00:38 23 with, this is how they prepare the sample, this is what they
12:00:42 24 do when they get it into the transmission electron
12:00:44 25 microscope. This is based on 10 grid openings.

12:00:47 1 If they were to look at 20 grid openings, then
12:00:49 2 their sensitivity increases. So to find one fiber, if you
12:00:55 3 go to the top, one fiber, there has to be a certain
12:00:59 4 concentration in that talc sample. And finding one fiber,
12:01:03 5 using their method, there has to be approximately 14 million
12:01:08 6 asbestos fibers in that gram of talc.

12:01:11 7 Q All right. Let me take a step back. So if there
12:01:15 8 are four tremolite fibers that they find in their 10 grid
12:01:22 9 examination?

12:01:23 10 A 10 grid openings.

12:01:24 11 Q 10 grid openings. You've said before four fibers
12:01:28 12 are generally not reported. It's got to be five of the same
12:01:31 13 type, according to Johnson & Johnson's method, right?

12:01:34 14 A Yes.

12:01:35 15 Q All right. So this gets reported as no asbestos?

12:01:39 16 A I think they say below the detection limit, or
12:01:43 17 it's not quantifiable. No structure's detected. So there's
12:01:48 18 a few different things that they say.

12:01:50 19 Q Actually, and this is -- the jury will hear this
12:01:52 20 from their witnesses. Their witnesses have said zero, no
12:01:57 21 asbestos, asbestos-free, absolutely none, okay. So if
12:02:04 22 they're saying it off of the tests that you've seen when
12:02:07 23 they just say if it's four tremolite fibers, they're going
12:02:11 24 to report it as none, how many fibers would be in a gram of
12:02:16 25 Johnson & Johnson Baby Powder that the company will never

12:02:24 1 report and say do not exist?

12:02:28 2 A Based on those calculations, it would be
12:02:31 3 approximately 57 million asbestos structures in a gram,
12:02:37 4 because that's the detection limit of four fibers.

12:02:43 5 Q And by the same token?

12:02:45 6 A Got to be five, and they'll say, yes, it's there.

12:02:48 7 Q A gram, this is the big jumbo, 22-ounce.

12:02:56 8 A That makes it easy for me. I forgot they put the
12:02:59 9 623 grams.

12:03:00 10 Q 623 grams. And you're saying each one of those
12:03:04 11 can have 56 million asbestos fibers and be reported by the
12:03:10 12 company as asbestos-free and get a zero finding?

12:03:14 13 A Typically no structures detected.

12:03:18 14 Q And by the same token, let's say instead of four
12:03:21 15 there are eight asbestos fibers found, four of them are
12:03:24 16 tremolite and four of them are anthophyllite. Under the
12:03:29 17 Johnson & Johnson method, is it a positive finding?

12:03:36 18 A Typically not unless it has five each. They could
12:03:41 19 have five tremolite fibers and they would say positive
12:03:45 20 weight percent, and the four anthophyllite fibers that would
12:03:54 21 not be reported typically.

12:03:55 22 Q Have you found both tremolite asbestos and
12:03:58 23 anthophyllite in the baby powder?

12:04:01 24 A Yes, sir.

12:04:02 25 Q And this, again, is 113 million fibers in each

12:04:07 1 gram, so you'd multiply that times 623 for this bottle?

12:04:13 2 A Yes, sir.

12:04:18 3 Q And it continues down with all of the different
12:04:21 4 kinds of fibers that have been found in the baby powder; is
12:04:24 5 that fair to say?

12:04:25 6 A That's fair.

12:04:28 7 Q Now, this lack of sensitivity. Is it important
12:04:35 8 when you're doing the TEM to look at more openings or less?

12:04:41 9 A It's always better to look at more grid openings.
12:04:44 10 The position or the test is always better if you do more.
12:04:50 11 So, if you don't concentrate it and you want to find that
12:04:54 12 one fiber, instead of looking at 10, 20 or 30 fiber grid
12:05:00 13 openings, some scientists have done this in the past,
12:05:04 14 they've looked at a thousand grid openings, or 800 grid
12:05:07 15 openings.

12:05:08 16 Now, a magnification of 25,000 times, that's like
12:05:13 17 a small grid opening, that's a lot of area to cover in that
12:05:17 18 magnification, so it takes a long time even for 100 grid
12:05:24 19 openings. You could spend days on one sample, and we have.

12:05:28 20 Q Do you know what that is?

12:05:30 21 A Squiggly lines and a circle.

12:05:33 22 Q Okay. You draw your own next time. That is an
12:05:37 23 Easter egg.

12:05:38 24 A Ah.

12:05:41 25 Q Your kids ever hunt Easter eggs or you growing up?

12:05:45 1 A I've not only hunt Easter eggs, I have put plenty
12:05:50 2 of Easter eggs out for my kids to find. And I periodically
12:05:55 3 find them throughout the year, the ones I forget where I
12:05:59 4 could stick them.

12:06:01 5 Q In that regard, if you really want to find the
12:06:03 6 Easter eggs, if you really want to find them, it's important
12:06:08 7 to you to find them, do you look everywhere or do you quit
12:06:13 8 looking after you've done 10 percent or 20 percent or
12:06:17 9 30 percent?

12:06:20 10 A It depends on which of my kids do it. No, it's a
12:06:25 11 good analogy. If you're -- say you're all out in the
12:06:29 12 backyard. You should look all over in the backyard. Not
12:06:33 13 just in the flowerbeds. If you can concentrate all those
12:06:37 14 eggs in the flowerbeds, then just look in the flowerbeds and
12:06:41 15 you'll find them all.

12:06:43 16 So it's a good analogy on -- because we're looking
12:06:46 17 at area. It's real estate that we're looking at these high
12:06:51 18 magnifications.

12:06:53 19 I watched the game last night, you know,
12:06:56 20 basketball. Real easy to look at everything on a
12:07:01 21 basketball. It's nine and a half inches. Magnify it 25,000
12:07:05 22 times, it's now almost -- a little bit over 4 miles in
12:07:08 23 diameter. It takes a while to search all around that
12:07:12 24 surface of that basketball looking for that magnification.

12:07:15 25 Same thing with a transmission electron

12:07:16 1 microscope. When you're looking at 25,000 times in that
12:07:22 2 small opening, it's a lot of real estate. So it takes a
12:07:26 3 long time, but you got to look at them all.

12:07:28 4 Q All right. Doctor, let's move on past that, and
12:07:32 5 we're going to come to the next stop on our road. We've got
12:07:36 6 two more stops. One -- this next stop is Plaintiffs'
12:07:40 7 exposure, okay?

12:07:42 8 A Yes, sir.

12:07:42 9 Q Did you actually do some work trying to determine
12:07:46 10 how much the plaintiffs have been exposed to through the
12:07:54 11 calculations that you've been able to make and that you've
12:07:57 12 seen from some other folks you've worked with?

12:08:00 13 A Yes, sir.

12:08:01 14 Q All right. First of all, in his opening, Mr.
12:08:08 15 Bicks said that asbestos has been found to cause ovarian
12:08:13 16 cancer, but only in what he called causal association
12:08:20 17 between asbestos, page 839, your Honor, and cancer of the
12:08:25 18 ovary was clearly established. And then he says: But they
12:08:29 19 talk about heavy occupational exposure. People who work in
12:08:33 20 factories. And some of the studies go back to crocidolite.

12:08:39 21 Have you looked at heavy occupational exposure
12:08:44 22 before?

12:08:46 23 A Yes. Heavy is very subjective. I've looked at
12:08:50 24 that occupational exposures of folks for a lot of years who
12:08:54 25 worked with what I would call regular construction asbestos

12:08:59 1 products. You know, products that either primarily they're
12:09:03 2 installing or products that where people were making them,
12:09:07 3 but it's primarily folks who are using the end product,
12:09:11 4 asbestos-containing thermal insulation or insulating cement
12:09:14 5 or joint compound, those type of products. And make
12:09:18 6 calculations on what their occupational exposure is.

12:09:23 7 Q So you've actually made calculations for
12:09:24 8 occupational exposure; is that right?

12:09:28 9 A I have.

12:09:28 10 Q And have you made calculations for the exposure
12:09:30 11 with these ladies?

12:09:35 12 A I looked over and verified exposures that --
12:09:41 13 occupational exposures that were determined for these folks.

12:09:43 14 Q And those were the ones done by Dr. Egilman, the
12:09:48 15 occupational health/science expert that if we've got time
12:09:53 16 we'll put on the stand, if we don't -- or don't need to put
12:09:56 17 him on in rebuttal then we will not.

12:09:58 18 But you actually looked at his figures and relied
12:10:01 19 upon those along with your testing?

12:10:03 20 MR. DUBIN: Your Honor, I'm going to object.
12:10:04 21 We're getting into Dr. Egilman's opinions.

12:10:10 22 MR. LANIER: I'm going to his, your Honor,
12:10:12 23 he's relied upon.

12:10:13 24 THE COURT: I'll give a little leeway.
12:10:15 25 Overruled at this point.

12:10:17 1 Q (By Mr. Lanier) You have looked at those figures?

12:10:19 2 A I have.

12:10:19 3 Q You've done the testing before for occupational
12:10:22 4 exposure?

12:10:23 5 A Done the calculations for occupational exposure,
12:10:26 6 yes.

12:10:26 7 Q And you have verified the things you've looked at
12:10:28 8 in trying to determine the exposure of these Plaintiffs?

12:10:32 9 A Yes. I went through and redid calculations, the
12:10:37 10 calculations are correct.

12:10:38 11 Q Now, in this regard, how has the plaintiffs'
12:10:44 12 exposure compared?

12:10:45 13 MR. DUBIN: Your Honor, I'm going to object.
12:10:47 14 I think we're going to have to approach at this point.

12:10:49 15 THE COURT: Okay.

12:10:50 16 (Counsel approached the bench, and the
12:10:50 17 following proceedings were had:)

12:15:17 18 MR. DUBIN: I don't know exactly where he's
12:15:18 19 going here, but Dr. Longo didn't have dose calculations and
12:15:19 20 such for individual plaintiffs at his deposition. As I
12:15:20 21 understand what Mr. Lanier's trying to do right now is say,
12:15:21 22 well, since your deposition have you reviewed and verified
12:15:22 23 Dr. Egilman's work, and then to have Dr. Longo talk about
12:15:23 24 what Dr. Egilman found, which is not appropriate.

12:15:24 25 If I knew he was going to do any calculations for

12:15:25 1 these plaintiffs then we would have deposed him on this
12:15:27 2 issue. It's not what he indicated he was going to do in
12:15:28 3 this case.

12:15:28 4 MR. LANIER: In his deposition he
12:15:29 5 specifically said that these people had significant
12:15:30 6 exposure. This gentleman had a full deposition with him.
12:15:31 7 Never asked him what he meant by significant. That's all
12:15:32 8 I'm asking him. He's termed it significant. I want him to
12:15:33 9 explain what significant is.

12:15:34 10 I presented him for a deposition. He could ask
12:15:35 11 anything he wanted. When someone uses a term like that,
12:15:36 12 it's like saying it's a long string, how long is it? That's
12:15:38 13 incumbent upon Mr. Dubin to ask those questions.

12:15:39 14 MR. DUBIN: Your Honor, if he's going to do
12:15:39 15 dose calculations, if he's just going to say they had
12:15:41 16 significant exposure with no quantification of that at all.

12:15:42 17 THE COURT: Well, he said in his deposition
12:15:43 18 significant exposure?

12:15:43 19 MR. LANIER: Yes.

12:15:43 20 MR. DUBIN: Again, I need to look in his
12:15:44 21 deposition what he said about that. I'm happy to over the
12:15:45 22 noontime. I know he did not do dose calculations, all he
12:15:47 23 did was largely look at Felsher's notes. In other words, to
12:15:48 24 see that they used baby powder.

12:15:49 25 He didn't, for example, take exposure numbers that

12:15:50 1 you would expect from baby powder and try to figure out a
12:15:52 2 dose that any of these people had. Dr. Egilman tried to do
12:15:53 3 that.

12:15:53 4 THE COURT: You're not going to ask him about
12:15:54 5 dose?

12:15:54 6 MR. LANIER: Actually, I am in the extent
12:15:55 7 that he did that test, the below the waist test. Yes, he
12:15:56 8 did that test, and that's the basis of the numbers that have
12:15:58 9 been used.

12:15:58 10 THE COURT: If it's a test he did that's
12:15:59 11 different, but you were saying dose calculations of someone
12:16:00 12 else?

12:16:00 13 MR. DUBIN: I expect him to talk about what
12:16:01 14 the dose calculation was for what the number was that he
12:16:02 15 himself has said he has no -- so what he did for the below
12:16:04 16 the waist study is took his highest concentration bottle,
12:16:05 17 which is from before when there was really even --

12:16:06 18 THE COURT: Okay. Mr. Dubin, that's going to
12:16:06 19 go to the weight. What I'm going to allow him to testify to
12:16:08 20 opinions that he's stated in the deposition. If he's used
12:16:10 21 significant exposure in his deposition, then that's going to
12:16:11 22 be talked about here. What that actually means is subject
12:16:12 23 to cross-examination.

12:16:12 24 MR. DUBIN: I understand. In terms of the
12:16:13 25 quantification of this, he has never said that that number

12:16:14 1 is representative of the exposures that any of the
12:16:16 2 plaintiffs in this case. For example, he took the highest
12:16:17 3 bottle that he could find from a time period when a lot of
12:16:18 4 these people weren't even using the product.

12:16:20 5 THE COURT: That all goes to the weight of
12:16:21 6 his testimony.

12:16:21 7 MR. LANIER: And in fairness, the witness
12:16:22 8 also said that he relied upon Dr. Egilman's work, and Dr.
12:16:23 9 Egilman you got to depose fully on all of this because he's
12:16:25 10 the one that did the calculation.

12:16:26 11 MR. DUBIN: My understanding is he's going to
12:16:26 12 rely on his own data. Dr. Longo's going to rely on his own
12:16:28 13 data to do this calculation. If we're getting further into
12:16:29 14 that and Dr. Longo's now going to try to do Dr. Egilman
12:16:30 15 light without him on the stand, that's different.

12:16:31 16 THE COURT: He's going to be able to testify
12:16:32 17 as to his opinions and his calculations. He's going to be
12:16:33 18 able to testify of any other opinions that he stated in his
12:16:35 19 deposition and that you had the opportunity to cross-examine
12:16:36 20 on. So that's the parameters. That's the guardrails we're
12:16:38 21 in right now. Anything outside of that we'll take it up at
12:16:39 22 the sidebar.

12:16:39 23 MR. DUBIN: Okay. I understand, Judge.

12:16:40 24 (The proceedings returned to open court.)

12:16:41 25 THE COURT: Ready to proceed?

12:16:41 1 MR. LANIER: Thank you, your Honor.

12:16:41 2 Q (By Mr. Lanier) All right. Sir, to continue. You
12:16:42 3 used a term for the exposure that the plaintiffs had when
12:16:44 4 you gave a deposition in this case. Do you remember what
12:16:45 5 your term was?

12:16:45 6 A Significant exposure.

12:16:46 7 Q What do you mean by that term?

12:16:46 8 A That it is a measurable amount of exposure that
12:16:47 9 would be above, quote, background exposures in the ambient
12:16:49 10 air. So a minimum is 10 to 20 times above what you would --
12:16:50 11 what some people would say is normally in everyday air that
12:16:52 12 you breathe.

12:16:52 13 Q Now, our intent is to play some portion of a
12:16:53 14 deposition of Dr. Egilman to the jury, where Dr. Egilman
12:16:55 15 performed actual calculations. Did you verify those
12:16:56 16 calculations?

12:16:56 17 A I did.

12:16:57 18 Q And do they confirm with what you said to the jury
12:16:58 19 and to Mr. Dubin when he deposed you, is that this is
12:16:59 20 significant exposure to asbestos for these plaintiffs?

12:17:00 21 A Yes, they do.

12:17:01 22 Q By the same token, are you able to say, is there a
12:17:02 23 difference between occupational exposure and Plaintiff
12:17:03 24 exposure, just in the mechanics of how it's done?

12:17:04 25 A There's a big difference.

12:17:05 1 Q Explain what you mean, please.

12:17:06 2 A People who use asbestos products or manufacture
12:17:07 3 asbestos products, they don't take the powder of the product
12:17:11 4 that has asbestos in it and sprinkle it on themselves every
12:17:15 5 day. Or put it in their groin area in their underwear or
12:17:19 6 put it under their arms. That's a whole different type of
12:17:22 7 exposure than using a product that, yes, you're getting dust
12:17:26 8 on you, but you're not taking that asbestos product and
12:17:30 9 throwing, not throwing it, but in a bottle and shaking it on
12:17:34 10 yourself day, every day, or six or seven or eight times to
12:17:39 11 your kid who you're changing the diaper. That's a whole
12:17:43 12 different exposure.

12:17:44 13 It's not what happens when people actually use
12:17:48 14 asbestos products because they're using it for a reason.
12:17:50 15 Putting it on a wall or they're sanding a brake shoe that
12:17:54 16 has asbestos in it. The dust from that asbestos product,
12:17:59 17 put it in a bottle, and every day shaking it on themselves.

12:18:05 18 Q So, have you ever found any industrial exposure
12:18:10 19 where people are taking the asbestos and shaking it on
12:18:13 20 themselves and around their nose?

12:18:17 21 A No. No, I've never seen an actual work practice
12:18:22 22 with an asbestos product where that is going on.

12:18:25 23 Q Now, certainly they're still breathing it, is that
12:18:29 24 fair to say? The industrial workers?

12:18:31 25 A Yes, sir. They're not holding their breath.

12:18:33 1 They're still breathing, and they're having very significant
12:18:36 2 exposures. But think about instead of pouring the
12:18:40 3 asbestos-containing joint compound, which can have as little
12:18:44 4 as 1 to 2 percent asbestos in powder, instead of pouring it
12:18:48 5 in a bucket and pouring water in there, pouring it in a
12:18:52 6 container and taking it home to use as body powder. That's
12:18:57 7 a whole nother level of exposure.

12:18:59 8 Q So, mr. Bicks wants to say that the studies that
12:19:02 9 are so clear on asbestos causing ovarian cancer were
12:19:05 10 occupational exposure studies, do you put the plaintiffs'
12:19:09 11 exposures in the same category based upon your experience?

12:19:13 12 A Yes, sir, I would.

12:19:16 13 Q All right. Now, have you looked at and produced a
12:19:22 14 summary of the number of asbestos fibers that these
12:19:27 15 plaintiffs would have breathed, is that math work yours or
12:19:32 16 Dr. Egilman's?

12:19:34 17 A That was Dr. Egilman's. I just verified that the
12:19:37 18 math worked and looked at where he got his formula and
12:19:42 19 verified because we do the same stuff.

12:19:44 20 Q All right.

12:19:46 21 MR. LANIER: Judge, I am still trying to get
12:19:47 22 through with him before lunch, but with an understanding
12:19:50 23 that perhaps we can talk about this at sidebar before I
12:19:54 24 officially pass him, and I might come back for one more
12:19:57 25 thing, but I'll wait and do it while the jury's eating lunch

12:20:00 1 if that's okay, in the interest of time.

12:20:03 2 Q (By Mr. Lanier) Now, did you, in computing how
12:20:07 3 much these folks were exposed to and how many fibers they
12:20:11 4 were exposed to, did you use certain resources?

12:20:18 5 A Yes.

12:20:18 6 Q Can you tell the jury about how you went about
12:20:20 7 determining the significant exposure of the plaintiffs? I
12:20:23 8 guess, first, can you give us a range of their exposure?

12:20:27 9 A The ranges for their exposures were approximately
12:20:31 10 0.3 or 0.4 fiber years up to 32 fiber years, I believe was
12:20:37 11 on the high end.

12:20:38 12 Q And fiber years, I got to tell you, I still don't
12:20:43 13 understand after doing this stuff for a long time. Is that
12:20:49 14 a lot of fibers?

12:20:52 15 A I guess it depends if you're -- what receiving end
12:20:55 16 you're on. Fiber years, think of this way. If a person
12:20:59 17 smokes a pack of cigarettes every day, a whole pack, in one
12:21:04 18 year he has a one-cigarette pack exposure. If he does that
12:21:08 19 for 30 years, we'll say you have a 30-year cigarette pack
12:21:12 20 exposure.

12:21:13 21 If I'm in an occupation where I'm exposed every
12:21:17 22 day for eight hours one fiber per cc, that's -- at the end
12:21:21 23 of the day, is one fiber per cc. I do that for a whole work
12:21:26 24 year, I have a one fiber per cc, or one fiber exposure year.
12:21:31 25 If I do that for 25 years, I have a 25-fiber year exposure.

12:21:36 1 So it's sort of like an average of what's gone on
12:21:40 2 for your occupational asbestos, that's how they kind of
12:21:45 3 judge you. Some people call it a dose. I don't call it
12:21:48 4 dose. I call it a cumulative exposure assessment, where you
12:21:51 5 try to determine how often you're using the product, how
12:21:55 6 long, how close are you to it. If they're using hands-on or
12:22:00 7 not hands-on. And then what the exposures are, and you can
12:22:03 8 calculate this out.

12:22:04 9 Q Did you use some different resources -- let's
12:22:08 10 start with your own test, right? The shake test that y'all
12:22:13 11 did, right?

12:22:13 12 A Yes.

12:22:14 13 Q You measured the asbestos in the air, you told
12:22:16 14 that to the jury. We went through the numbers. You used
12:22:19 15 the highest content you could, worst case scenario, so we
12:22:25 16 can do the math back down from that. Fair?

12:22:28 17 A Fair. I wouldn't call that the worst case
12:22:31 18 scenario that was in one of the containers. I would expect
12:22:34 19 as we go along and do this research, we'll find containers
12:22:39 20 with more, we'll find containers with less. There was a
12:22:42 21 specific reason we used that high one in our test.

12:22:45 22 Q Tell the jury why.

12:22:46 23 A Because there have been published paper,
12:22:49 24 scientific peer-reviewed paper, where they did a study very
12:22:53 25 similar to this, but they didn't use Johnson & Johnson, they

12:22:56 1 used another manufacturer of cosmetic talc. They found that
12:23:00 2 the concentration in that particular sample that they used
12:23:04 3 in their study was a little bit higher than what we found, I
12:23:08 4 think it was 18 million per gram, so we wanted to do --

12:23:13 5 Q Just for the record, that's Cashmere Bouquet?

12:23:17 6 A Correct. I didn't know if I should say it or not.

12:23:20 7 Q It's fine. It's a courtroom.

12:23:21 8 A So, as a scientist I go, okay, I've got one that's
12:23:25 9 15 million per gram. Same kind of talc, cosmetic talc, can
12:23:30 10 I duplicate what they got doing something very similar. So
12:23:34 11 that's why we used that higher one because they used a high
12:23:39 12 one, and I wanted to see does Cashmere Bouquet or Johnson &
12:23:44 13 Johnson behave the same, and they had a different type of
12:23:48 14 asbestos. They had anthophyllite asbestos, primarily not
12:23:51 15 tremolite. Doesn't make a difference.

12:23:54 16 And what we found was no. Even though they had a
12:23:56 17 peer-reviewed paper, published it, they used the 18 million,
12:24:02 18 I used 15 million, we got very similar results.

12:24:05 19 Q Okay. So, also, did you get some statistics in
12:24:10 20 addition from NIOSH for how the baby dusting is done and how
12:24:14 21 much exposure there would be from using it on a baby?

12:24:18 22 A Yes.

12:24:19 23 Q And tell the jury why and what study you were
12:24:22 24 doing there.

12:24:23 25 A Well, NIOSH did a study where they measured the

12:24:27 1 fibers that were generated during a changing of a typical
12:24:32 2 baby, in changing the diaper.

12:24:35 3 So they changed the diaper, it was a doll, I'm
12:24:38 4 pretty sure, and then they measured how many fibers were in
12:24:42 5 the air, and they got, I think it was about an average of
12:24:45 6 2.2, I believe it was, or .2. I'd have to look at it again.

12:24:50 7 Q You get your work done, you give those numbers to
12:24:53 8 Dr. Egilman. Dr. Egilman does his work, he returns it to
12:24:59 9 you, and then you check his numbers and make sure that
12:25:01 10 they're right, and you testified that it was significant
12:25:03 11 exposure. Fair?

12:25:05 12 A Sort of. What's fair is I testified in my
12:25:09 13 deposition that these folks, these women, were going to have
12:25:13 14 significant exposure to asbestos from using this product.

12:25:18 15 The papers in the past, the published papers that
12:25:24 16 NIOSH did, that's pretty common for this, so Egilman -- Dr.
12:25:29 17 Egilman would use that, I looked at it and I agreed with it.
12:25:33 18 I did the calculations and verified it, so I don't have any
12:25:35 19 issues with what he stated.

12:25:36 20 Q Okay. What I'd like to do now is before we break,
12:25:39 21 if I can do it fairly quickly. We may come back to this
12:25:43 22 after lunch if it seems appropriate.

12:25:47 23 But I want to go to the final road, end of the
12:25:50 24 road for you, which is the stop I've termed Scientific
12:25:53 25 Truth. Okay. And I want to ask you some questions, very

12:26:00 1 much in line with the questions that I've asked Dr. Blount.

12:26:17 2 I'm going to set aside, in the interest of time,

12:26:19 3 all of the different studies that we can be looking at and

12:26:25 4 reports, and I just want to cut to the chase, okay?

12:26:28 5 A Yes, sir.

12:26:28 6 Q I showed this -- this is an exhibit from Dr.

12:26:32 7 Blount's deposition, it was Exhibit Number 10 to her

12:26:35 8 deposition. It was what I did at the very start with her.

12:26:38 9 After getting her name, I asked her: Have you

12:26:40 10 tested Johnson & Johnson Baby Powder for asbestos? She told

12:26:44 11 me yes, and I wrote it down. Did Johnson & Johnson Baby

12:26:46 12 Powder have asbestos? She told me yes. And I wrote it

12:26:51 13 down.

12:26:51 14 We found out later in the deposition she had done

12:26:54 15 multiple tests beyond just the one in the paper. I'm going

12:26:57 16 to use a purple pen for you, and I'm going to put Dr. Longo

12:27:02 17 here next to that.

12:27:03 18 And I want to ask you the same question, Dr.

12:27:06 19 Longo. I want to ask you: Did you test Johnson & Johnson

12:27:13 20 Baby Powder for asbestos?

12:27:18 21 A Yes.

12:27:21 22 Q How many bottles?

12:27:23 23 A I think we're up to either 36 or 37 bottles, 37

12:27:29 24 different containers.

12:27:32 25 Q And some of them off eBay. Mr. Bicks was right

12:27:36 1 when he said some were off eBay, supplied by lawyers. I've
12:27:40 2 sent you some that we've been able to buy, right?

12:27:44 3 A Correct.

12:27:44 4 Q Some were off the shelf?

12:27:46 5 A Yes.

12:27:46 6 Q Like Alice Blount's were off the shelf?

12:27:50 7 A Some were off the shelf.

12:27:52 8 Q What Mr. Bicks didn't tell the jury is one of them
12:27:55 9 came from the Johnson & Johnson museum, didn't it?

12:27:58 10 A Yeah. That's the 1978 historical sample.

12:28:01 11 Q And the 1978 historical sample that came -- no
12:28:06 12 lawyer touching it, playing with it?

12:28:12 13 A No, I don't think. I don't know if the lawyers
12:28:14 14 touched it or not. No, but it came from --

12:28:17 15 Q Johnson & Johnson?

12:28:17 16 A Johnson & Johnson.

12:28:18 17 Q And the one from Johnson & Johnson's museum, did
12:28:24 18 it have asbestos in it?

12:28:25 19 A Yes, sir.

12:28:28 20 Q The one that came from our client, Krystal Kim,
12:28:31 21 Krystal was back there yesterday. Stand up please, Krystal.
12:28:36 22 Did you test the bottle from her house?

12:28:38 23 A Yes.

12:28:38 24 Q Did it have asbestos in it?

12:28:40 25 A It did. So I think we're up to 37, I think it may

12:28:45 1 be 36 bottles. And out of the 36 bottles, 20 of them were
12:28:49 2 positive for asbestos in our analytical sensitivity. Our
12:28:59 3 analytical sensitivity is that finding one asbestos fiber
12:29:04 4 you have to have about 8,000 fibers were gram. That sounds
12:29:07 5 like a lot, but it's really -- for this procedure it's very
12:29:10 6 high-end level sensitivity, considering if you don't do the
12:29:14 7 concentration method and you do all the standard TEM method,
12:29:18 8 you're dealing with millions per gram before you'd have a
12:29:21 9 chance to find it.

12:29:23 10 Q And when you say you found it in only 20 of 37,
12:29:29 11 does that mean that the other 17 are asbestos-free?

12:29:34 12 A Well, no. Because we're using the heavy liquid
12:29:38 13 density method, one thing for sure we cannot find in there
12:29:43 14 is chrysotile asbestos. Because the weight, remember, we go
12:29:48 15 back to that cubic weight of chrysotile is really close to
12:29:51 16 talc. So I would never expect to find chrysotile.

12:29:57 17 Anthophyllite asbestos has a chemistry that could
12:30:00 18 make it about the same weight as the talc, all the way up to
12:30:04 19 where it has the same density -- same density as tremolite.

12:30:11 20 So most of the anthophyllite we found is ones that
12:30:14 21 have a lot of iron in it to give it more density. We have
12:30:17 22 found some in the past where they don't have that iron in
12:30:21 23 it, that was surprising, but then you think about it, we're
12:30:25 24 finding talc plates down there.

12:30:27 25 So, our research in the future would be to go back

12:30:31 1 and look at these samples, what I'll call the old method,
12:30:35 2 where you got to look at grid after grid after grid to see
12:30:39 3 if they're still below the detection limit. So you can't
12:30:43 4 ever say it's not there.

12:30:45 5 The method is really sensitive for tremolite but
12:30:48 6 not for anthophyllite, that's low iron, and not for
12:30:53 7 chrysotile asbestos.

12:30:56 8 MR. LANIER: Your Honor, at this point in
12:30:57 9 time I've got about one minute left before a good breaking
12:31:01 10 point, but if I could offer as a demonstrative Plaintiffs'
12:31:05 11 Exhibit 8351. I've given a copy to opposing counsel, as
12:31:09 12 well as one to the bench.

12:31:12 13 MR. DUBIN: No objection as to demonstrative.

12:31:13 14 THE COURT: This is 8351?

12:31:15 15 MR. LANIER: Yes, sir.

12:31:16 16 THE COURT: Will be received for that
12:31:16 17 purpose.

12:31:18 18 Q (By Mr. Lanier) So, we've got a chart put together
12:31:24 19 with pictures of different bottles that you have tested, and
12:31:31 20 I don't think these are all of them that have positive
12:31:33 21 findings, obviously I didn't put any of the ones that didn't
12:31:38 22 reach the sensitivity level for you to find anything.

12:31:41 23 I don't have any of those on here because we don't
12:31:44 24 know what the count might be, if any at all.

12:31:47 25 A You scared me. I'm going, they didn't find that

12:31:50 1 many per gram. That's the whole bottle.

12:31:53 2 Q This is the whole bottle, yes, yes. This is
12:31:55 3 something put together by Ms. Cooper so you better not fuss
12:32:01 4 with her.

12:32:01 5 A I'm not fussing. I'm just trying to understand.

12:32:05 6 Q All right. If I'm -- if I'm right and she may not
12:32:09 7 have done it, but she's the one that handed it to me. We've
12:32:12 8 got some pictures out here to the side so that the jury, as
12:32:16 9 we go through this maybe with some other witnesses, can see
12:32:19 10 some of the photos you took of the asbestos fibers.

12:32:23 11 But did you, in fact, find asbestos fibers that
12:32:26 12 work out to significant numbers in these various bottles?

12:32:31 13 A In my opinion, yes.

12:32:33 14 Q Okay. And in that regard, sir, I am going to --
12:32:43 15 your Honor, be at a point where I can -- I can break now,
12:32:53 16 and I'll either pass the witness right after lunch or I'll
12:32:56 17 get into one last matter with him.

12:32:59 18 THE COURT: Yes, sir.

12:32:59 19 MR. LANIER: Thank you, Judge.

12:33:00 20 THE COURT: All right. Ladies and gentlemen,
12:33:01 21 that gets us to the lunch hour. If we can go to 10 minutes
12:33:06 22 until two, if you would be upstairs subject to the call of
12:33:10 23 the sheriff.

12:33:11 24 Once again, thanks for your work this morning and
12:33:14 25 early afternoon. The Court again reminds you what we

12:33:18 1 discussed. Until the case is given to you to decide, please
12:33:21 2 do not do any research or investigation on your own. Keep
12:33:24 3 an open mind. Don't make any conclusions or decisions.

12:33:27 4 Don't let anyone try to talk to you about the
12:33:30 5 case, and don't do any research on the Internet. Or if any
12:33:38 6 information comes your way, please remove yourself from that
12:33:42 7 possibility of receiving that information and report the
12:33:45 8 contact to sheriff.

12:33:47 9 Thank you, all. We'll see you in a little while.
12:33:50 10 You are excused.

12:34:27 11 (The following proceedings were had in open
12:34:27 12 court, outside the presence and hearing of the jury:)

12:34:28 13 THE COURT: All right. You may be seated.
12:34:29 14 Anything on the record, Mr. Magee?

12:34:33 15 MR. MAGEE: No.

12:34:34 16 MR. DUBIN: I thought Mr. Lanier wanted to
12:34:36 17 raise this issue about what he's going to go into after
12:34:40 18 lunch, unless I'm wrong.

12:34:42 19 MR. LANIER: I don't need to be on the record
12:34:43 20 with it, your Honor. I just wasn't sure that I understood
12:34:46 21 the parameters of what you said at sidebar, and I didn't
12:34:49 22 want to cross anything. So I want to run through that with
12:34:52 23 you, and I'll try to put that together. If we could visit
12:34:56 24 with you five minutes before we get started.

12:34:59 25 THE COURT: I'll be back out at quarter to.

12:35:02 1 MR. LANIER: Thank you, Judge.

12:35:03 2 MR. DUBIN: That's fine, we'll do it then.

12:35:06 3 THE COURT: Court will be in temporary

12:35:07 4 recess.

12:35:25 5 (Court was held in recess for the noon hour.)

12:35:25 6 END OF VOLUME 6A. PLEASE REFER TO VOLUME 6B.

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CERTIFICATE

I, Jennifer A. Dunn, Registered Professional
Reporter and Certified Court Reporter, do hereby certify
that I am an official court reporter for the Circuit Court
of the City of St. Louis; that on June 7, 2018, I was
present and reported all the proceedings had in the case of
GAIL INGHAM, ET AL., Plaintiffs, vs. JOHNSON & JOHNSON,
Defendant, Cause No. 1522-CC10417-01.

I further certify that the foregoing pages
contain a true and accurate reproduction of the proceedings.

"/s/JENNIFER A. DUNN, RPR, CCR #485"

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Exhibit 77

**IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS
STATE OF MISSOURI
The Honorable Rex M. Burlison, Judge**

GAIL LUCILLE INGHAM, ET AL.,)	
Plaintiffs,)	
vs.)	Cause No. 1522-CC10417-01
JOHNSON & JOHNSON, ET AL.,)	
Defendants.)	

TRANSCRIPT OF MOTION HEARING

May 29, 2018

**JENNIFER A. DUNN, RPR, CCR #485
OFFICIAL COURT REPORTER
CITY OF ST. LOUIS CIRCUIT COURT
TWENTY-SECOND JUDICIAL CIRCUIT
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1 (The following proceedings were had in open
2 court:)

3 THE COURT: Let's go on the record In Cause
4 number 1522-CC010417-01, Ingham versus Johnson & Johnson.

5 Is there an announcement on behalf of the
6 plaintiff here?

7 MR. LANIER: Plaintiffs are ready, your
8 Honor.

9 THE COURT: Okay. On behalf of the
10 defendant?

11 MR. BICKS: Defendants are ready, your Honor.

12 THE COURT: Okay. So, there is not everybody
13 here?

14 MR. HEGARTY: Who are we missing, your Honor?

15 THE COURT: Well, Prost, for one.

16 MR. LANIER: Your Honor, we have non-suited
17 Imerys in this case, and I've put that on the record
18 confidentially with Ms. Dunn.

19 THE COURT: And Johnson & Johnson's aware of
20 this?

21 MR. HEGARTY: Yes, your Honor.

22 THE COURT: Okay.

23 MR. LANIER: We're streamlining.

24 THE COURT: Anything I should know about the
25 terms of the settlement with regard to, what is it, 537?

1 argument. If we've got any replies, your Honor, as long as
2 we can get the replies in by the following Monday, we'll
3 work the weekend.

4 THE COURT: How about Thursday for you and
5 Friday?

6 MR. LANIER: Works great, Judge.

7 MS. BAUER: That's fine.

8 MR. LANIER: Thank you, your Honor.

9 THE COURT: Just give me a second here.

10 MS. BARNARD: Alyssa Barnard for the Johnson
11 & Johnson entities. I'll be arguing motions to exclude
12 Dr. Longo and Dr. Madigan's testing.

13 THE COURT: It's Alyssa Barnard?

14 MS. BARNARD: B-A-R-N-A-R-D. I'll first
15 address Dr. Longo. Dr. Longo is a material scientist, who
16 tested 35 containers purporting to be Johnson & Johnson
17 products. And three actually that were not manufactured by
18 Johnson & Johnson, and he purports to have found asbestos in
19 approximately 19 out of the 35 samples that he tested.

20 Dr. Longo's analysis was relied on by Dr. Madigan,
21 who performed a statistical analysis of those results.

22 Your Honor, I'd like to begin by first handing up
23 a brief demonstrative setting out Dr. Longo's results, if I
24 may approach.

25 THE COURT: Yes, ma'am. Thank you.

1 MS. BARNARD: Your Honor, there are three
2 primary issues with Dr. Longo's testing that bear on
3 reliability and require the exclusion of his testing
4 evidence.

5 First, the samples he tested are unauthenticated,
6 and there are serious demonstrable risks of contamination.
7 Second, he failed to properly identify asbestos. And,
8 third, he improperly extrapolates his findings to the
9 broader population of the containers that he would have
10 tested based on sheer speculation.

11 On the first authentication issue. Missouri law
12 requires that experts base their opinions on reliable facts
13 and data. With respect to physical evidence, authentication
14 is a necessary component of reliability. And here, as you
15 can see from this chart, many of the samples are 50, 60, 70
16 years old.

17 They were manufactured before the 1950's, in the
18 end of the post-World War II era, and they purchased, many
19 of them, on eBay by various plaintiffs' lawyers. We have no
20 idea how they were handled, how they were stored, how many
21 hands they went through between manufacturing and today.

22 Other of the samples were obtained from clients
23 involved in the cosmetic talc litigation. And a handful of
24 samples, four, were purchased off the shelf by Dr. Longo and
25 by the plaintiffs' lawyers who provided the samples to him.

1 Now, there is not chain of custody for the vast
2 majority of these samples, as I mentioned before. And this
3 poses two serious risks.

4 First is a potential risk of product replacement.
5 This is addressed in our briefing. I won't belabor this
6 here. The more fundamental problem is a contamination
7 issue. Looking on the demonstrative chart that I provided.

8 Four of the samples Dr. Longo tested, Dr. Longo
9 found richterite in those samples. Richterite is different
10 than the other minerals that are at issue here. Richterite,
11 as Dr. Longo has acknowledged, was a component in insulation
12 materials. Hundreds of thousands of tons of richterite were
13 installed in homes around the country in the 1970s in
14 insulation and other asbestos-containing products.

15 Richterite is not alleged or known to be in any
16 talc mine that Johnson & Johnson sourced its talc from.
17 There is absolutely no explanation for the richterite to be
18 in the samples, other than post-manufacture contamination,
19 that they were sitting in someone's home or someone's office
20 building that contained richterite in insulation or other
21 household items, and that somehow or another these
22 microscopic richterite fibers got into these containers.

23 Plaintiffs do not address this issue in
24 opposition. They have absolutely no response and no
25 explanation, other than contamination for the richterite

1 ending up in these samples. So we know at least four of
2 Dr. Longo's samples are contaminated after manufacture with
3 minerals not found in Johnson & Johnson's talc mines.

4 On the other hand, we have four off-the-shelf
5 samples that Dr. Longo tested. They were sealed, they were
6 purchased at the store. All of those samples tested
7 negative for what Dr. Longo would call asbestos fibers.

8 So when we have demonstrated chain of custody, we
9 have no asbestos fibers. And interestingly enough, that
10 actually holds true with respect to other Plaintiffs'
11 experts in other cosmetic talc litigation. One
12 Dr. Fitzgerald similarly has not found asbestiform materials
13 in sealed off-the-shelf products.

14 But the containers without chain of custody
15 information have what Dr. Longo would call asbestos in them.
16 This serious demonstrated contamination requires the
17 exclusion of Dr. Longo's analysis.

18 Second, very briefly. My colleague, Ms. Trovato,
19 touched on the identification issue. I would like to
20 address it very briefly here only because Dr. Longo's
21 analysis is somewhat distinct from Dr. Compton's analysis.

22 He relies on a different source for the same
23 definition of asbestos. So Dr. Longo purports to rely on
24 the Asbestos Hazard Emergency Response Act definition of
25 asbestos. That's often called AHERA, you'll see that in a

1 lot of the briefing. And the EPA regulations promulgating
2 and enacting AHERA.

3 For all of Plaintiffs' insistence that this
4 asbestiform issue -- this asbestiform question is a
5 geological and not a regulatory question is just false. If
6 I could approach with a copy of the AHERA.

7 Your Honor, this is an excerpt of the AHERA Act as
8 enacted by Congress. If you turn to the second page.
9 Section 202 defines asbestos as the asbestiform varieties of
10 a number of minerals. That's about halfway down the page.
11 Section 202.3. Asbestos.

12 So that is the AHERA definition of asbestos.
13 Asbestiform varieties of the enumerated minerals. And that
14 definition is consistent throughout the regulatory field.
15 That is the federal regulatory definition of asbestos that
16 appears in a variety of regulatory locations that are
17 pointed to you in the brief, but one other -- one other
18 place that I would point your Honor. If I may approach.

19 Your Honor, these are additional federal -- this
20 is a portion of the Federal Register promulgated by the Mine
21 Safety and Health Administration, and on the first page in
22 Subsection 5 here is a discussion of the MSHA definition of
23 asbestos, which similarly and very fulsomely explains it is
24 limited to asbestiform minerals. And here, sort of above
25 the list of bullet points, it specifically says that

1 non-asbestiform minerals are excluded from the regulatory
2 definition of asbestos.

3 So the distinction that Plaintiffs are attempting
4 to draw between the regulatory and geological definitions of
5 asbestos doesn't exist. The regulatory definitions on which
6 Dr. Longo purports to rely define asbestos as asbestiform
7 minerals.

8 And Dr. Longo has conceded on numerous occasions
9 that his analysis does not distinguish between fibers of
10 asbestiform and non-asbestiform minerals. To the extent
11 that Dr. Longo does not distinguish between asbestiform and
12 non-asbestiform minerals, he cannot call his results
13 asbestos under the federal regulatory regime on which he
14 relies.

15 I'd like to turn now to the question of
16 extrapolation. On the demonstrative exhibit that we handed
17 up, on the far right column is what's a fibers per gram
18 column. Dr. Longo analyzed very small portions of talcum
19 powder. He counted identifiable, quantifiable numbers of
20 fibers. Most of the samples he tested contain very low
21 numbers of fibers; one or two. One outlier sample contained
22 101 fiber.

23 And Dr. Longo, in this chart and testimony,
24 extrapolates that to how many fibers of asbestos would be in
25 a gram of talcum powder, and then based on that how many

1 fibers of asbestos would be in a bottle of talcum powder.

2 At best, Dr. Longo's calculation, his
3 extrapolation, is sheer speculation. It's founded on an
4 assumption that whatever contamination he purported to find
5 in the sample that he conducted exists consistently
6 throughout this entire model.

7 Again, this is entirely unfounded at best. And in
8 actuality, his assumption is refuted by his own testing.
9 The vast majority of the samples that Dr. Longo tested were
10 containers. He only tested a single sample from each
11 container, but the last two items on this list, Dr. Longo
12 conducted two different samples from the same bottle of 1978
13 talc taken from Vermont.

14 And he found different levels of alleged amphibole
15 material in those two samples he confirmed the same
16 container, which is proof that there is no basis for
17 Dr. Longo's assumption underlying these eye popping,
18 frankly, calculations on the right-hand column.

19 If there is no basis to believe, for example, that
20 with the first sample Dr. Longo found 101 fibers in the
21 sample that he tested. If there is no basis for Dr. Longo
22 to believe that there are 101 asbestos fibers in every
23 single microgram of that bottle of talc, which there is not,
24 then there is no basis for him to opine that there's
25 15 million fibers per gram, or, you know, a billion fibers

1 per bottle.

2 I'd like to focus on one more issue with Dr. Longo
3 in addition to the sample testing. Dr. Longo did analysis
4 purporting to measure how much amphibole material someone
5 applying talc would be exposed to inhaling the talc. And he
6 used the first sample on this chart in that analysis.

7 As you can tell from looking at the various
8 findings of Dr. Longo, this is an extreme outlier. This
9 sample found, he calculated 15 million fibers per gram.
10 That is more than double the numbers of fibers per gram in
11 every other sample if you count them up. It is more than 30
12 times the average fibers per gram in a sample.

13 And choosing an outlier sample to inflate the
14 results is obviously an impermissible methodology not
15 permitted under Missouri law.

16 Accompanying this video is a -- excuse me.
17 Accompanying Dr. Longo's report on this is a video of him
18 applying talc to himself wearing an oversized respirator
19 that resembles a gas mask, while -- with Tyndall lighting,
20 which makes the dust in the room appear more visible.

21 This video is utterly unhelpful to the jury.
22 There's no question about how individuals apply talc to
23 theirself. Instead, this is intended to elicit an emotional
24 response from the jury. The reaction to seeing a roomful of
25 talc dust and a man in a gas mask is unduly prejudicial to

1 the defendants.

2 Your Honor, would it be better to address Madigan
3 now or to wait until after we've gone back and forth?

4 THE COURT: Let's finish Longo here. Thank
5 you. Mr. Lanier.

6 MR. LANIER: Thank you, Judge. I'll try to
7 argue as quickly as I can.

8 This is, again, as Mr. Cirsch pointed out on the
9 last expert, this is a rodeo we've been in before.

10 Dr. Longo's been challenged by Johnson & Johnson
11 in the last three mesothelioma cases, I believe, that were
12 tried. And, obviously, the judge allowed Dr. Longo to
13 testify.

14 Your Honor, I'm not suggesting that those judges
15 have any precedential value to you, you make your own
16 opinions, obviously. And we're here glad to make the case
17 to you, just to let you know that the arguments have been
18 made before.

19 First, she gave three arguments. Number one,
20 unauthenticated. I think if I'm understanding the argument
21 right, this would only be appropriate for testing if
22 Dr. Longo himself was there when it came off the assembly
23 line at the Johnson & Johnson plant, and took it 50, 40, 30,
24 20 years ago, because he's done this over those decades, and
25 held onto it until now.

1 That's not what happened. Some of them were taken
2 from the possession of the plaintiffs in this case. Some of
3 them were taken off of the shelves of the stores by
4 Dr. Longo. Some were taken off of eBay because it's the
5 best way to get ahold of older products in the older tins
6 that are still collectible.

7 What Ms. Barnard failed to tell you is there was
8 also some that was done -- produced by the museum of Johnson
9 & Johnson, where Johnson & Johnson had to open up their
10 museum and let some of the ones in their custody be tested
11 as well. And asbestos was found in the Johnson & Johnson
12 possession also.

13 That certainly goes to weight. He can be
14 cross-examined on that. But the idea that he can't testify
15 because he didn't physically take it off the assembly line,
16 I think's improper. Especially when you consider that the
17 contamination that's there is very realistic with what was
18 being found in the mines and what are the concerns that the
19 companies had to start with.

20 And so her first idea that it's unauthenticated, I
21 think, frankly is a side issue. The second idea that he
22 didn't properly identify asbestos because he didn't use what
23 they believe the AHERA definition to be.

24 Judge, there is going to be a massive semantic
25 argument that is set forward in this jury where the company

1 argues some geologic terms, and they say that this mineral
2 in this incarnation or form will cause disease if it's
3 shaped in one manner, but not if it's shaped in another
4 manner.

5 And so if it's an aspect ratio of 3-to-1, yeah,
6 maybe it causes disease. 2.99 to 1, no, it doesn't. But
7 then they've got another asbestiform standard that says not
8 3-to-1, it says 5-to-1. And then there's another one that
9 says 20-to-1, and then there is another one that says I
10 think even 100-to-1.

11 These definitions are all over the place. What is
12 asbestiform, what is not asbestiform, is not a consistent
13 thing at all. And what is a geologic term used by one
14 person is not always used by another person in the same way.

15 And it's not a question of the safety and the
16 health anyway, these are geologic terms. And so we've got
17 the doctors that will testify, and we've got Dr. Longo, who
18 will testify that he has found asbestos in these -- asbestos
19 fibers in these mines. I mean, in these products. He's not
20 the only one.

21 Dr. Alice Blount, who was an expert for Johnson &
22 Johnson back in the day. She pulled it off the shelves, she
23 found asbestos in it as well. She uses the same terms.
24 They don't use her as an expert any more. And she is
25 subject to another motion because now they don't want her

1 tests to come in either.

2 But he's properly identified it as asbestos. He
3 calls it that. They don't call it that I think is the
4 problem because they've played the word games to try to
5 disassociate themselves from the health hazards.

6 Her third argument is the improper extrapolation.
7 This does bleed over into Dr. Madigan, who is the
8 statistician a little bit, but I'll leave that argument for
9 later, but to say these are his extrapolations. This is
10 what it is. They want to fuss about it.

11 They want to say, hey, isn't it possible that the
12 other gram had more, or the other gram had less? Well, yes,
13 you can argue that point. And that would go to weight. But
14 all he's saying here is based upon the amount that I tested
15 and the amount of fibers I found in the entire bottle, if
16 that carries out true, here's how much would be in that
17 bottle.

18 Here's how much would be dusting on the people and
19 be shaken out on the people, inhaled and taken internally.
20 So that's -- this all goes to weight. It doesn't go to
21 admissibility.

22 And as to the video that she threw in at the end.
23 The video is extremely important. I think jurors don't
24 understand how this works. The video has got what's called
25 Tyndall lighting. And at least in our age, we remember

1 those movie theaters before it was all digital, and you
2 could look up and see the projection and the dust in the
3 air, that's Tyndall lighting. And they do that so they can
4 show how much dust is created in the process of either
5 putting it on yourself or dusting a baby, and he did both
6 and then measured the air as well and showed this.

7 And so it's a very direct demonstration in a way
8 that a jury can best understand. And, of course, he's
9 wearing a mask. He's not going to inhale the asbestos. If
10 he didn't wear a mask they'd be impeaching him for that. So
11 it's all due and proper, and an extremely important way to
12 illustrate how dusty this process is for the person that's
13 using the baby powder. Thank you, your Honor.

14 THE COURT: How long is that video?

15 MR. LANIER: Two minutes. We can cut it down
16 even beyond that. It's not a long video, Judge.

17 THE COURT: And what's the -- what is the
18 biological mechanism that your case relies on?

19 MR. LANIER: We've got two, your Honor. We
20 show peritoneal migration. In other words, if you put it in
21 the genital openings, near the genital openings, it can
22 migrate through the genital tract.

23 But even more important is the inhalation.
24 Because once it's inhaled, the asbestos fibers being so
25 infinitesimally small almost, they'll go down into the very

1 deepest alveolar sacs within the lungs and they'll migrate
2 into the lymph system and the blood system.

3 So one of the studies, for example, that I've used
4 in the depositions that most clearly show this, is one where
5 the doctors took stillborn babies from mothers. And
6 dissection and path examination of the stillborn babies are
7 able to find asbestos fibers that not only had migrated
8 through the mom's lungs, but even transplacental and carried
9 into the placenta.

10 And so it's the inhalation, but it's also the
11 peritoneal applications. Thank you, your Honor.

12 THE COURT: And that video would be as to the
13 inhalation?

14 MR. LANIER: Yes, your Honor. Yes, your
15 Honor. Thank you.

16 THE COURT: All right.

17 MS. BARNARD: Very briefly, your Honor. And
18 I'll begin with the video.

19 As Mr. Lanier stated, the lighting, the Tyndall
20 lighting that's used in the video makes the dust appear very
21 prominently. And that's exactly why this is prejudicial
22 because the dust that appears in the video is the talc dust.

23 The video does not allow you to aggregate and to
24 show whether or not there's asbestos. And, obviously, the
25 vast majority, even according to Plaintiffs, of the contents

1 of a bottle of cosmetic talcum powder are dust.

2 So encouraging the jury to conflate talc dust with
3 asbestos talc is exactly what's prejudicial about the video.
4 And Mr. Lanier's statements about the utility of showing the
5 jury the dust suggests that that's exactly the confusion
6 that the video is intended to elicit.

7 THE COURT: If it's talc dust or asbestos
8 dust.

9 MS. BARNARD: Your Honor, talc and asbestos
10 are not the same thing. And the inhalation theory appears
11 to rely on the contamination of asbestos, but when the jury
12 sees the video and sees the dust, the implication is that
13 all of that dust is asbestos, which is not the case. And
14 again, the video is actually --

15 THE COURT: In the case, what I'm trying to
16 focus in on is I thought that the plaintiff -- their case is
17 based on talc and asbestos.

18 MS. BARNARD: Your Honor, my understanding of
19 what Mr. Lanier just said is that the inhalation aspect of
20 the case is -- is predicated on asbestos. I don't believe
21 that the inhalation component of the case is focused on
22 talc.

23 I think that the only inhalation component is
24 focused on asbestos getting in somehow to the ovaries. I
25 believe that's what Mr. Lanier just said.

1 And for precisely these reasons, because of the
2 gas mask, for example, I mean, it's just simply because of
3 the minimal relevance, Dr. Longo has done calculations, we
4 think that those calculations are unreliable to the extent
5 they're allowed in.

6 The video is not necessary to allow Dr. Longo to
7 explain to the jury what his calculations are. The video is
8 prejudicial, and it has been excluded in other
9 jurisdictions, as we point out in the brief.

10 More fundamentally to Mr. Lanier's point that
11 these are all questions of weight. They are not. Missouri
12 law is very clear that unfounded assumptions, unfounded
13 speculation, unfounded hypotheses are not admissible under
14 Missouri law.

15 You cannot ask an expert to opine on a hypothesis,
16 or to predicate his testimony on an assumption that
17 something is true if there is no basis in the record to
18 believe that it is true. Here not only is there no basis in
19 the record to believe that Dr. Longo's various hypotheses
20 are true, they're actually contradicted by the record making
21 them inadmissible under Missouri law.

22 On the authentication point. Our position is not
23 that Dr. Longo needed to personally observe every container
24 when it came off the manufacturing line, but what we need is
25 a chain of custody. Affidavits from the individuals while

1 the bottles were in their possession, indicating did they
2 replace it with something. Where did they keep it? How
3 long did they have it? Where did it come from? When did
4 they buy it, for example.

5 We don't have any of that. They haven't presented
6 affidavits. We don't even have affidavits from -- some
7 other plaintiffs' firms got these bottles from their own
8 clients. We don't even have affidavits from their clients.
9 We don't have affidavits from almost no one, who was the
10 source of these samples.

11 And again, Mr. Lanier did not respond to the
12 richterite contamination point because there is no response.
13 The only explanation for richterite in Dr. Longo's sample is
14 contamination, which is to the jury unreliable and not the
15 proper basis for expert testimony. Thank you, your Honor.

16 MR. LANIER: If I could real quick. We don't
17 agree that richterite's a contaminate from some outside
18 source. They've certainly found richterite in various
19 mines. And we believe that richterite is something that
20 could absolutely be found in the talc mines. We're not
21 going to argue anything other than that.

22 As for the dust issues with the video and the
23 confusions. I want to be candid with the Court. Some
24 courts have not let in the video. Other courts have let in
25 the videos. I've been able to play the videos before. But

1 I know that other lawyers have both played them and not
2 played them. It all depends upon the judge and it all
3 depends upon the jurisdiction.

4 I think they're absolutely critical videos, and I
5 do think the jury needs to understand, and I'll be
6 explaining it. They certainly can cross-examine the jury.
7 This is showing all of the dust. It's not simply isolating
8 out the asbestos. The asbestos is microscopic.

9 But it shows you how easy it is to be exposed
10 through inhalation when you are using the products in the
11 way they are designed to be used. When you combine that
12 with someone like one of our plaintiffs' slides show the
13 asbestos surrounded by platy talc in the pathology slide,
14 you understand that it's inhaling that stuff, that the
15 asbestos doesn't seemingly disaggregate from the talc when
16 it's in the air.

17 I don't think anybody's going to contend
18 necessarily that it does, that it must. So I think that's
19 absolutely critical evidence for the jury to understand how
20 dusty this truly is as a process, and how easily it is
21 inhaled, and how absurd it is to think that the human body's
22 not going to be inhaling some of the asbestos when you do
23 this process. Thank you, Judge.

24 THE COURT: All right. Anything further,
25 Ms. Barnard?

1 MS. BARNARD: No, your Honor.

2 THE COURT: All right. We'll take that under
3 advisement. All right. We'll go to lunch.

4 MR. MAGEE: I got two pro hacks.

5 THE COURT: Pick this up about 2 o'clock. Is
6 that fine for everyone?

7 (Court was held in recess for the noon hour,
8 after which the following proceedings were had in open
9 court:)

10 THE COURT: All right. We're back on the
11 record in Cause Number 1522-CC10417-01. And I think we left
12 off -- did we touch on Madigan, David Madigan?

13 MS. BARNARD: No, your Honor, I think that's
14 up next.

15 THE COURT: Is that where we left off?

16 MS. BARNARD: Yes.

17 THE COURT: And you told me he was a
18 statistician, is that what he is?

19 MS. BARNARD: Your Honor, he is a
20 statistician. Again, Alyssa Barnard for Johnson & Johnson.

21 Dr. Madigan is a statistician who conducted a
22 statistical analysis of Dr. Longo's sample analysis. He
23 also provides a critique of certain epidemiological reports
24 from a statistical perspective that various defense experts
25 rely on related to Italian talc.

1 the first couple of days.

2 MR. BICKS: Understood.

3 MR. LANIER: Great.

4 MR. BICKS: Thank you.

5 THE COURT: And I'm going to be liberal on
6 the causes for hardship. What we don't want is frustrated
7 jurors that would rather be enjoying their summer. Or
8 tremendously frustrated. So I'm going to be liberal with
9 the hardships. Anything else today?

10 MR. BICKS: No, thank you.

11 MR. LANIER: Nothing from Plaintiffs, Judge.
12 Thank you very much for all your time today.

13 THE COURT: Sure. We'll gear it up. Mr.
14 Hegarty, you got something?

15 MR. HEGARTY: I just wanted to know what time
16 you wanted to start tomorrow morning.

17 THE COURT: I think I've got a criminal bond
18 motion that should take about 15 minutes. So I'd say 9:15
19 tomorrow.

20 MR. HEGARTY: Thank you.

21 (The hearing was concluded.)
22
23
24
25

CERTIFICATE

I, Jennifer A. Dunn, Registered Professional Reporter and Certified Court Reporter, do hereby certify that I am an official court reporter for the Circuit Court of the City of St. Louis; that on May 29, 2018, I was present and reported all the proceedings had in the case of GAIL INGHAM, ET AL., Plaintiffs, vs. JOHNSON & JOHNSON, Defendant, Cause No. 1522-CC10417-01.

I further certify that the foregoing pages contain a true and accurate reproduction of the proceedings.

"/s/JENNIFER A. DUNN, RPR, CCR #485"

Exhibit 78

Page 1

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION: MIDDLESEX COUNTY
DOCKET NO. MID-1784-17AS

ROSALIND HENRY and FREDRICK C.)
HENRY,) TRANSCRIPT OF
) PROCEEDINGS
Plaintiffs,)
) MOTIONS
v.)
)
BRENNTAG NORTH AMERICA, INC,)
et al.,)
)
Defendants.)
)

Friday, September 14, 2018
9:05 a.m.
Middlesex County Courthouse
New Brunswick, New Jersey

B E F O R E:

H O N O R A B L E A N A C. V I S C O M I, JSC

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Job No. NJ3017304

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Johnson & Johnson Consumer, Inc.

1 If your Honor please, John Garde of McCarter &
2 English on behalf of the Johnson & Johnson
3 defendants.

4 MS. BROWN: Good morning, your Honor.
5 Alli Brown on behalf of the J&J defendants and I'm
6 here with my colleagues, Jed Winer, Rachel
7 Farnsworth, and Jack Nolan.

8 THE COURT: Good morning. When you
9 argue, just move up to counsel table so the
10 microphones can pick you up.

11 So as we discussed off the record, we
12 are here today with regard to in limine motions, and
13 these are in limine motions that must be decided in
14 advance of opening statements which will be Monday.

15 And so the first motions are a group
16 of motions which are related and deal with
17 Dr. Longo, plaintiffs' expert. The defendants are
18 seeking to preclude his testimony; in the
19 alternative, request a Rule 104 hearing. There's
20 some related issues with regard to Supreme Court in
21 re: Accutane litigation, as well as intertwined
22 within that, the ability of plaintiffs to utilize
23 test results where scientific articles, learned
24 treatises from Dr. Blount and the whole issue with
25 regard to her perhaps appearing by way of prior

1 know Johnson & Johnson was on notice there was
2 asbestos in their talc.

3 THE COURT: That's a separate issue.

4 MR. SWETT: Beyond that, our case is
5 primarily going to be focused on Vermont talc.
6 Dr. Longo is going to testify about Vermont talc. I
7 don't know that Italian talc is really going to be
8 discussed in our case in chief.

9 MR. FINCH: Other than that he said
10 it was Italian talc in the --

11 MR. SWETT: In the below-the-waist.

12 THE COURT: All right. Okay. Jury
13 question in terms of interpreting that.

14 MS. BROWN: Understood. Understood,
15 your Honor. I mean, I just don't think --

16 THE COURT: It's not, you know, what
17 is that saying, clear as mud, right?

18 MS. BROWN: No. I completely
19 understand and we're happy to present this to the
20 jury. I understood plaintiff's task to be to find
21 something that suggests a purchase after '75 and I
22 think her testimony on 305 remains clear that that
23 was the last purchase time, but I understand it's a
24 fact issue.

25 THE COURT: Yeah. Okay. So I don't

1 know why counsel said this court hates hearing about
2 its gatekeeping function because I don't; however,
3 maybe you think so, this court has always understood
4 its gatekeeping function and has exercised that
5 gatekeeping function.

6 In these talc cases, which I now
7 can't recall the first one that I tried or at least
8 started the trial before resolution, there have been
9 continual motions to bar the testimony of, frankly,
10 all of plaintiffs' experts, Dr. Lanzo usually -- not
11 Lanzo, Dr. Longo usually being on the plaintiff's
12 side, although he has been on the defense side, and
13 the court has exercised its gatekeeping function in
14 reviewing the applications before the court,
15 reviewing the expert reports, and determining where
16 a 104 hearing is necessary or not necessary and has
17 conducted a number of those hearings.

18 So in terms of our reading of the
19 Supreme Court's decision in re: Accutane
20 litigation, I'm reading from, this has not yet
21 gone -- been published, so this is from page 83 of
22 the decision. "In adopting use of the Daubert
23 factors, we stop short of declaring ourselves a
24 Daubert jurisdiction. Like several other states, we
25 find the factors useful, but hesitate to embrace the

1 full body of Daubert case law as applied by state
2 and Federal courts.

3 "First, we have already broadened our
4 approach to testing for the reliability of expert
5 testimony for certain areas in civil law. See Kemp.

6 "But to date, we retain the general
7 acceptance test for liability in criminal matters.

8 "Second, there is no monolithic body
9 of case law uniformly or even consistently applying
10 Daubert as others have noted. We hesitate to sweep
11 in adherence to the various approaches taken among
12 the circuits and state jurisdictions when applying
13 the Daubert factors; thus, we do not adopt a
14 standard we cannot fully discern in its application
15 at this time.

16 "While the factors are helpful and
17 while individual cases may be persuasive in
18 appropriate settings, we cannot ignore that there
19 are discordant views about the gatekeeping role
20 amongst Daubert jurisdictions. Our view" -- and I'm
21 eliminating the reference to certain citations.

22 "Our view of proper gatekeeping in a
23 methodology-based approach to reliability for expert
24 scientific testimony requires the propensity to
25 demonstrate that the expert applies his or her

1 scientifically recognized methodology in the way
2 that others in the field practice the methodology.
3 When a proponent does not demonstrate the soundness
4 of a methodology both in terms of its approach to
5 reasoning and to its use of data from the
6 perspective of others within the relevant scientific
7 community, the gatekeeper should exclude the
8 proposed expert testimony on the basis that it's
9 unreliable.

10 "Importantly, that approach, namely
11 to determine whether the scientific community would
12 accept the methodology employed by plaintiffs'
13 experts, would use the underlying facts and data as
14 plaintiff experts was employed by the trial court
15 here." So that's taking it back specific to that
16 case.

17 But within this decision the court
18 goes through the development of the law regarding
19 the court in its gatekeeping function; beginning
20 with Rubanick, discussing Landrigan, discussing
21 Kemp, discussing Hisenaj. And so the court is of
22 the opinion that it has exercised its gatekeeping
23 function, exercised it as it relates to Dr. Longo.

24 The present application here merely
25 adds in, judge, here is the Accutane litigation

1 case. This requires you to conduct a hearing.
2 There is no specific requirement that a hearing must
3 be conducted where the court has already undertaken
4 the analysis and found that a hearing is not
5 required because experts in the field may disagree.
6 Here, Dr. Longo's methodology, as plaintiff's
7 counsel has pointed out, as was borne out in the
8 Lanzo trial and in the pleadings that were filed in
9 advance before the court in that trial, Dr. Longo
10 employed a methodology that defendant Johnson &
11 Johnson's own consultant and now experts have
12 utilized. That Dr. Blount herself, who was a
13 consultant for Johnson & Johnson, used.

14 In re: Accutane litigation cannot be
15 read to require that there's only one methodology
16 utilized by -- in a specific area. Clearly here
17 there are different methodologies at play. With
18 regard to the methodology employed by Dr. Longo, not
19 only has it been recognized by Blount, RJ Lee,
20 plaintiffs -- defendants' expert Mr. Sanchez, but
21 ISO as well. And so the court denies the motion to
22 bar, denies the motion to require the 104 hearing.

23 I do want to get to this issue of the
24 below-the-waist, and I do find that there are
25 significant issues with regard to substantial

CERTIFICATE OF OFFICER

I CERTIFY that the foregoing is a true and accurate transcript of the testimony and proceedings as reported stenographically by me at the time, place and on the date as hereinbefore set forth.

I DO FURTHER CERTIFY that I am neither a relative nor employee nor attorney or counsel of any of the parties to this action, and that I am neither a relative nor employee of such attorney or counsel, and that I am not financially interested in the action.

ANDREA NOCKS, CCR, CRR

Certificate No. XI001573

Exhibit 79

<p style="text-align: right;">Page 3068</p> <p>1 2 3 4 5 October 17, 2018 6 9:27 a.m. 7 8 9 REPORTER'S TRANSCRIPT OF PROCEEDINGS, held at 10 Superior Court of California, County of Humboldt, 825 11 5th Street, Courtroom 1, Eureka, California, before 12 Judge Timothy A. Canning, reported by Linda 13 Vaccarezza, a Certified Shorthand Reporter of the 14 State of California. 15 16 17 18 19 20 21 22 23 24 25</p>	<p style="text-align: right;">Page 3069</p> <p>1 A P P E A R A N C E S: 2 KIRKLAND & ELLIS 3 Attorneys for the Defendants Johnson & 4 Johnson and Johnson & Johnson Consumer, Inc. 5 333 South Hope Street 6 Los Angeles, California 90071 7 BY: KIMBERLY BRANSCOME, ESQ. 8 F. CHADWICK MORRIS, ESQ. 9 JAY BHIMANI, ESQ. 10 11 12 13 14 SIMON GREENSTONE PANATIER 15 Attorneys for the Plaintiff 16 1201 Elm Street 17 Dallas, Texas 75270 18 BY: DAVID GREENSTONE, ESQ. 19 CONOR NIDEFFER, ESQ. 20 21 22 23 24 25</p>
<p style="text-align: right;">Page 3070</p> <p>1 APPEARANCES (CONT'D) 2 FOLEY & MANSFIELD 3 Attorneys for Colgate-Palmolive Company 4 300 South Grand Avenue 5 Los Angeles, California 90071 6 BY: GARY SHARP, ESQ. 7 PETER MULARCZYK, ESQ. 8 9 10 11 DENTONS US 12 Attorneys for Imerys Talc America, Inc. 13 One Market Plaza 14 Spear Tower 15 San Francisco, California 94105 16 BY: MORDECAI BOONE, ESQ. 17 JENNIFER LEE, ESQ. 18 19 20 QUINN EMANUEL URQUHART & SULLIVAN 21 50 California Street 22 San Francisco, California 94111 23 BY: MORGAN TOVEY, ESQ. 24 25</p>	<p style="text-align: right;">Page 3071</p> <p>1 THE COURT: We'll go on the record. We 2 are here on Allen versus Brenntag, case number DR 3 180132. 4 Before we call the jury in, Ms. Branscome. 5 MS. BRANSCOME: Yes, Your Honor. There 6 was one issue that we would like to raise in 7 advance of Dr. Longo's testimony, but I didn't 8 realize that Dr. Longo was in the audience. So if 9 he might be excused for this discussion. 10 THE WITNESS: No problem. 11 THE COURT: Thank you, sir. I appreciate 12 that. So Dr. Longo has left the courtroom. And 13 Ms. Branscome? 14 MS. BRANSCOME: Thank you, Your Honor. We 15 were able to work with plaintiff's counsel on 16 specific objections that we have to Dr. Longo's 17 slide set this morning. But one of the issues that 18 I raised with Mr. Greenstone is Dr. Longo's 19 discussion of other testing techniques beyond TEM 20 that have been used on Johnson's Baby Powder. 21 The way Dr. Longo's slide set is set up, 22 there's a -- one cohesive section on testing 23 methods that were used on both Johnson's Baby 24 Powder and Cashmere Bouquet. It conflates that 25 there is TEM and PLM on all the products.</p>

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1 MR. GREENSTONE: Your Honor, would this be
2 a good place for the --
3 THE COURT: If it's a good place for you,
4 it will be a good time to take our morning break.
5 So let's return at ten after 11:00. And just a
6 reminder to the jurors. Please don't talk about
7 the case outside of this courtroom. And don't talk
8 about it amongst yourselves. Thank you.
9 (Jury leaves.)
10 THE COURT: Anything we need to address?
11 MR. GREENSTONE: I don't think so.
12 THE COURT: You're excused. Please return
13 by ten after.
14 (Recess taken from 10:52 a.m. to
15 11:09 a.m.)
16 THE COURT: Counsel may be seated.
17 Is there anything we need to address prior
18 to having the jury back?
19 MR. GREENSTONE: Not from the plaintiff's
20 perspective.
21 MR. TOVEY: No, Your Honor.
22 THE COURT: Mr. Bailiff, if you don't
23 mind, call the jury back in.
24 (Jury enters courtroom.)
25 THE COURT: Counsel may be seated. And we

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1 products were sold. They go from a -- essentially,
2 a metal or tin can, and sometime in the mid '60s, I
3 believe, or -- it went to a plastic bottle. And
4 they had times where they said boric acid, borate.
5 So you can get an idea on the different time frames
6 that they used these different containers.
7 Q. Why is it important to look at different
8 time frames for different containers?
9 A. Because we are trying to -- it's
10 important, because we are trying to evaluate people
11 that may have had exposures in the '60s as well as
12 the '70s or the '80s and the '90s, not just today.
13 Q. Did the talc sources for Johnson & Johnson
14 change?
15 A. They did.
16 Q. And what were they, sir?
17 A. Through the '40s up until approximately
18 1968, '69 or so, it was the Italian mine for
19 Johnson's Baby Powder. From '68, '69 to
20 approximately 2004, it was from the Vermont talc
21 mines. Then after that, it's primarily, my
22 understanding, China.
23 Q. So did you do tests on Johnson's Baby
24 Powder that were from the time period when they
25 were mining from Italy, and also during the time

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1 were in the middle of the direct examination of
2 Mr. Greenstone.
3 MR. GREENSTONE: Thank you.
4 Q. Dr. Longo, do we now understand, first of
5 all, the methodology that you used for both the
6 Johnson & Johnson test and the Cashmere Bouquet
7 test, are they generally recognized accepted
8 methodologies for doing the type of work that you
9 were doing?
10 A. Yes, it is.
11 Q. And I want to start with, are we now
12 ready -- have we talked enough about the
13 methodologies and the tools to be able to talk
14 about the actual test results?
15 A. Yes, I believe so.
16 Q. So the first I want to talk to you about
17 is the Johnson & Johnson testing. And so first of
18 all, tell us what this is demonstrating, Dr. Longo.
19 How many samples did you test, and what does this
20 picture demonstrate?
21 A. These are the number of different
22 containers that we tested, and I think we are at
23 36. 35 or 36 at this point. This original study
24 at 30, and then we did some more after that. These
25 look at -- shows you the various years that these

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1 period when they were mining from Vermont?
2 A. Yes, sir.
3 Q. What is this showing, sir?
4 A. We received four empty cans from, I
5 believe that was the one plaintiff's attorneys,
6 Lanier law office. And when we received them, we
7 photographed them. We opened them up, and there
8 was nothing in them. They were essentially empty.
9 These cans, you can see they actually
10 would have coupons in them. It was sort of a
11 give-away. They never had talc in them. And this
12 was one of the older cans that was empty that had
13 been -- the top easily came off. Typically, you
14 cannot get those tops off unless you use something
15 to pry it. And you can see why the top easily came
16 off. It had been pushed in on the sides.
17 Q. It had actually been -- the can actually
18 had to be damaged in order for the top to come
19 easily off?
20 A. In my opinion, yes, sir.
21 Q. And with respect to these, Dr. Longo, and
22 I think I asked you this, how did you get these
23 samples?
24 A. I think every one of them except, I don't
25 know if it's on there, came from plaintiff's

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1 attorneys. Three sets of plaintiff's attorneys.
2 Q. Is that the typical way that you might get
3 materials to test, either from plaintiffs or from
4 defendants, things of that nature?
5 A. Typically, yes.
6 Q. And what is this demonstrating, sir?
7 A. This is a off-the-shelf Johnson Baby
8 Powder bottle, and we wanted to see if we could
9 pull the top off. Just by doing it.
10 Q. Now, I know just for purposes of the
11 record, is it the kind of top that you have to
12 twist to see the holes, and then you can dump it
13 out?
14 A. Yes. That has a cap that twists, and then
15 just like you said, when you see the holes, you can
16 dispense the powder, and you turn it, it stops it.
17 So we wanted to see if somebody could take one of
18 these bottles, twist the top off, and fill it with
19 something else. Or did you have to use a tool in
20 order to get the top off.
21 Q. What did you find out?
22 A. We found out that the specifications for
23 these tops are very exact so they don't come off
24 very easily. Because you don't want to do this,
25 and have ten ounces of baby powder going where you

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1 else's baby powder in there or cosmetic talcum
2 powder in there so then when we analyze it, we're
3 really analyzing somebody else's stuff.
4 Q. So you were checking to see if there was
5 any evidence that any of these had been tampered
6 with?
7 A. Yes.
8 Q. And what did you find out?
9 A. We couldn't determine that any of them had
10 been tampered with that we analyzed.
11 Q. What is this, sir?
12 A. This is just one of the safety hoods that
13 we have in our laboratory. So that when we have to
14 deal with things that you do not want to breathe or
15 inhale, this is specifically set up so the airflow
16 is always going under here into the system, that up
17 through the filtration system. So that if you open
18 any powders in here or any organic chemicals that
19 are not very -- you don't want to be breathing at
20 all, you do it inside the hood. We have a number
21 of these.
22 Q. And then what is this showing, sir? It
23 says at the top -- again, and I'm sorry it's been
24 cut off, "particle size distribution"?
25 A. Well, one of the things we wanted to look

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1 may not want it to go, like on the floor or into a
2 baby. So we had people in the lab, some of the
3 more younger, stronger ones to see if they could
4 just twist it off. Nobody could do it. So then we
5 took a small metal tools and gently pried it off to
6 see if it left a mark, and that's what we are
7 looking at here.
8 Q. Over on the right side, what is this, sir?
9 A. Well, this is before, and this is after
10 the tool was used to go up under the lip and pry
11 it. And like everything, if you -- that polymer is
12 actually pretty soft, meaning it's not real
13 resistant to pressure. It leaves an indent. So
14 then we check all these bottles to see if they had
15 indents, and we did this a couple times.
16 Q. Why were you doing that? Why was it
17 important for you to check and see if there was any
18 type of evidence that the bottle had been pried
19 off? Why do you care about that, Dr. Longo?
20 A. Well, we care about it because we wanted
21 to understand that what we were saying we were
22 testing, that this is from Johnson's Baby Powder,
23 is it, in fact, was put in there originally by
24 Johnson & Johnson during the manufacturing process,
25 or in fact, did somebody open it up, put somebody

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1 at is if we analyzed each of the Johnson's Baby
2 Powders and looked at the particle size of the
3 talc, would they be consistent from bottle to
4 bottle to bottle to bottle. That would then allow
5 you to look at and say, "Well, they have the same
6 size distribution, from the early years all the way
7 up to the years they are making it in 2016."
8 Q. What is the significance of particle size
9 distribution for particular products?
10 A. The significance is if it's all the same
11 particle size distribution, that tells me that it's
12 all been manufactured and milled the same way, and
13 if it's milled the same way, where they are now
14 milling and getting to the small particle sizes, it
15 has to have some consistency. If you're doing the
16 same thing over and over and the samples are
17 consistent from the milling process, they have the
18 same particle size distribution.
19 Q. Is there published literature that you're
20 familiar with that talks about this issue about
21 whether particular products have particular and
22 specific particle size distributions?
23 A. Yes, there is.
24 Q. And what is that? Just what in general
25 does that say, sir?

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1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF HUMBOLDT)

4 I, LINDA VACCAREZZA, CSR NO. 10201, do
5 hereby certify that I am a Freelance Certified
6 Shorthand Reporter in and for the State of California,
7 and that as such, I reported the proceedings had in
8 the above-entitled matter at the time and place set
9 forth herein;

10 I further certify that my stenotype notes
11 were thereafter transcribed by me, and that the
12 foregoing pages numbered 3067 to 3288, constitute a
13 full, true and correct transcription of my said
14 notes.

15 I declare under penalty of perjury under
16 the laws of the State of California that the foregoing
17 is true and correct.
18

19
20 DATED: 18th day of October, 2018.

21
22 LINDA VACCAREZZA, CSR, RPR, CLR, CRP
23 License No. 10201
24
25

Exhibit 80

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF ALAMEDA

BEFORE THE HONORABLE BRAD SELIGMAN

DEPARTMENT 23

---000---

TERESA ELIZABETH LEAVITT
and DEAN J. MCELROY,

Plaintiffs,

No. RG17882401

vs.

JOHNSON & JOHNSON, et
al.,

Defendants.

_____ /

REPORTER'S TRANSCRIPT OF TRIAL

(WILLIAM E. LONGO, Ph.D.)

Thursday, February 7, 2019

Full Session

Taken before EARLY K. LANGLEY
RMR, RSA, B.A.
CSR No. 3537

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<p style="text-align: right;">Page 10</p> <p>1 For the Defendants Johnson & Johnson; Johnson & Johnson Consumer, Inc.:</p> <p>2 NATHAN DULLUM</p> <p>3 JERMAIN JONES</p> <p>4 Orrick, Herrington & Sutcliffe LLP</p> <p>5 The Orrick Building</p> <p>6 405 Howard Street</p> <p>7 San Francisco, California 94105</p> <p>8 (415) 773-5700</p> <p>9 Ndullum@orrick.com</p> <p>10 Jjones@orrick.com</p> <p>11 MATTHEW ASHBY</p> <p>12 GEOFFREY G. MOSS</p> <p>13 Orrick Herrington & Sutcliffe LLP</p> <p>14 777 South Figueroa Street, Suite 3200</p> <p>15 Los Angeles, California 90071</p> <p>16 (213) 612-2257</p> <p>17 Mashby@orrick.com</p> <p>18 Gmoss@orrick.com</p> <p>19 MICHAEL BROWN</p> <p>20 SCOTT RICHMAN</p> <p>21 Nelson Mullins Riley & Scarborough LLP</p> <p>22 100 South Charles Street, Suite 1200</p> <p>23 Baltimore, Maryland 21201</p> <p>24 (443) 392-9401</p> <p>25 Mike.brown@nelsonmullins.com</p> <p>Scott.richman@nelsonmullins.com</p>	<p style="text-align: right;">Page 12</p> <p>1 Dr. Longo's depositions, dealt with his analysis of</p> <p>2 Johnson & Johnson products that had Chinese talc in</p> <p>3 them. And so I tried -- I met with counsel and</p> <p>4 asked -- told him that I was not going to go into</p> <p>08:51:03 5 Chinese talc, but I believe that would be improper for</p> <p>6 the defendants to elicit testimony with -- from</p> <p>7 Dr. Longo with regard to his testing of Johnson &</p> <p>8 Johnson products that were made from Chinese talc</p> <p>9 because it's irrelevant to his testimony in this case.</p> <p>08:51:27 10 MR. ASHBY: Couple points, Your Honor. One is,</p> <p>11 one of the Chinese talc bottles that he uses for his</p> <p>12 control, so he has a -- he has a control bottle which</p> <p>13 is a bottle that he purchased off the shelf that's</p> <p>14 relevant to understanding the processes that he does</p> <p>08:51:43 15 with respect to analysis. You have to have a control</p> <p>16 blank. I don't see any way to separate the control</p> <p>17 blank from the rest of his analyses. So that's the</p> <p>18 first point.</p> <p>19 The other point is that he has three other</p> <p>08:51:56 20 off-the-shelf bottles that were purchased in the 2000s</p> <p>21 that I would like to ask him about if he found asbestos</p> <p>22 in those, the reason being, one, we've heard testimony</p> <p>23 now from Mr. -- from Dr. Hopkins elicited by Mr. Maimon</p> <p>24 regarding China and the use of Chinese talc at some</p> <p>08:52:15 25 point during the use of Korean talc. There was a</p>
<p style="text-align: right;">Page 11</p> <p>1 --oOo--</p> <p>2 P R O C E E D I N G S</p> <p>3 --oOo--</p> <p>4 Thursday, February 7, 2019 - 8:49 a.m.</p> <p>5 (Morning Session)</p> <p>6 (Whereupon, the following proceedings were held</p> <p>7 outside the presence of the jury:)</p> <p>8 THE COURT: Good morning, everybody. So what</p> <p>9 do we have?</p> <p>08:49:51 10 MR. MAIMON: Yes, Your Honor.</p> <p>11 In anticipation of Dr. Longo's testimony this</p> <p>12 morning, I met and conferred with counsel for J&J and</p> <p>13 confirmed with him that I was not going to deal with</p> <p>14 talcs that are not at issue in this case that Dr. Longo</p> <p>08:50:11 15 may have tested, and specifically, some of the talcs</p> <p>16 that Dr. Longo tested deal with Chinese talc that</p> <p>17 Johnson & Johnson sourced for their post 2003 products</p> <p>18 pursuant to the Court's ruling pretrial we've avoided</p> <p>19 all of the Chinese talc. So we're not going to go into</p> <p>08:50:31 20 it.</p> <p>21 I did note that in the cross-examination of</p> <p>22 Mr. Poye the other day, there was a report that he had</p> <p>23 issued to Dr. Longo that dealt with 79 samples. It</p> <p>24 wasn't identified as such, but some of those samples I</p> <p>08:50:44 25 happen to know because I've dealt -- defended</p>	<p style="text-align: right;">Page 13</p> <p>1 switchover, it sounded like, from the testimony of</p> <p>2 Dr. Hopkins that Mr. Maimon elicited. So they have</p> <p>3 heard about Chinese talc being used in lieu of Korean</p> <p>4 talc at some point.</p> <p>08:52:30 5 And then, finally, there were -- there was much</p> <p>6 testimony from Dr. Hopkins with respect to what</p> <p>7 Johnson & Johnson was considering in the 2000s with</p> <p>8 respect to warnings. There were demonstrative -- there</p> <p>9 were exhibits that were entered from, I think like 2013</p> <p>08:52:47 10 or 2014 where they were discussing warnings, there was</p> <p>11 a PowerPoint slide that was shown from Johnson &</p> <p>12 Johnson. So, to the extent there is an issue about</p> <p>13 whether Johnson & Johnson should have warned or not</p> <p>14 warned, it's relevant for the jury to know that there</p> <p>08:53:01 15 is testing that has been done in the 2000s, which is</p> <p>16 Chinese talc, at least after 2003, that suggests there</p> <p>17 is no need to warn because there is no asbestos in the</p> <p>18 Chinese talc.</p> <p>19 MR. MAIMON: So taking that in order,</p> <p>08:53:15 20 Your Honor, I think that it is proper to question</p> <p>21 Dr. Longo about the control bottle that he used, the</p> <p>22 same way that they cross-examined Mr. Poye about that.</p> <p>23 And I don't have any objection to that.</p> <p>24 With regard to the duty to warn, the duty to</p> <p>08:53:30 25 warn ends at the last exposure, which is 1998 in this</p>

<p style="text-align: right;">Page 14</p> <p>1 case. And so admission by a party opponent of the 2 dangerous nature of the product is always relevant, is 3 always admissible. This witness is not going to 4 address duty to warn issues. Dr. Longo is going to 08:53:48 5 talk about the asbestos and the talc, the testing of 6 it, and Ms. Leavitt's exposure to it. 7 But he's not going to get into duty, 8 negligence, failure to warn, anything like that. 9 The final thing I would note is that the -- 08:54:10 10 well, Dr. Hopkins, I did go into the switchover from 11 Korean talc to Chinese talc for talc sold in the 12 Philippines and the Far East, the purpose of that was 13 to establish what the vintage of samples that we have, 14 which are actually the vintage of samples that 08:54:25 15 Dr. Longo tested, which would be Korean talc as opposed 16 to some other source of talc. So that was a predicate 17 to establish when was the switchover at a certain point 18 in time so that we know that any products that were 19 manufactured and sold before that time were sourced 08:54:41 20 from Korean talc. It was not -- and it was specific to 21 the Far East market to establish those dates relevant 22 to Dr. Longo's testing of the Korean talc. 23 THE COURT: Remind me what those dates were. 24 MR. MAIMON: Sure. In 1991, Johnson & Johnson, 08:54:59 25 for the Philippines switched over Dr. -- and I think I</p>	<p style="text-align: right;">Page 16</p> <p>1 based upon the limited arguments that counsel has made, 2 we think that Your Honor should stick to the original 3 ruling and not let the parties go into Chinese talc in 4 this regard. 08:56:38 5 MR. ASHBY: So to address some of the points, 6 as the Court knows from our discussion before about 7 personal use, the FDA testing in 2009 and 2010, that we 8 were told that we could not get into -- you know, 9 obviously there is testing by the FDA done in 2009, 08:56:56 10 2010 of cosmetic talc, and some of that cosmetic talc 11 was Johnson & Johnson. We had a hearing on that 12 because they -- a motion in limine was filed regarding 13 that. We were told we could not get into that. I 14 think now, in view of the evidence that's come in, it's 08:57:11 15 very relevant. It's certainly relevant, as we 16 explained before, to punitive damages. My fear right 17 now is what the jury has heard is there were 18 considerations about warnings in the 2000s, and when 19 that was being done, they were looking at Chinese talc 08:57:27 20 at the time. I think that -- 21 THE COURT: That's part of why I said we're not 22 going to go into it because it was a different talc. 23 MR. MAIMON: Yes. And counsel for J&J, when we 24 dealt with this issue, Your Honor, did say -- it wasn't 08:57:49 25 Mr. Ashby -- did say that Chinese talc was irrelevant.</p>
<p style="text-align: right;">Page 15</p> <p>1 even have the... 2 MR. SATTERLEY: If I may -- it was 1991. They 3 switched over from Korean to Chinese to use in the 4 Philippines. The other thing I would like to add to 08:55:16 5 Mr. Maimon's argument is if we now here in the fourth 6 week of trial start going into Chinese talc, it's going 7 to be an undue consumption of time because we have 8 extensive testimony -- obviously Dr. Longo has tested 9 Chinese talc and found asbestos in some of the bottles, 08:55:31 10 didn't find it in others. 11 We got documentation regarding Chinese talc 12 with asbestos in it. Julie Pier, who Your Honor asked 13 me to go back and start withdrawing stuff and last 14 night I worked on withdrawing depositions we were going 08:55:43 15 to designate. We have extensive documentation where 16 Julie Pier finds chrysotile asbestos in Chinese talc. 17 So we have -- if we start at this point in time have 18 to -- now have to go into proving the asbestos content 19 in Chinese talc, we're not going to be able to withdraw 08:56:03 20 many of the depositions and we're going to -- there's 21 going to be an undue consumption of time spent on 22 Chinese talc, which is at least four or five years 23 after Ms. Leavitt quit using the Johnson's Baby Powder. 24 So under 352, Your Honor has already ruled and 08:56:20 25 determined it's irrelevant and excluded this, but, even</p>	<p style="text-align: right;">Page 17</p> <p>1 That's what -- the pretrial hearing actually was in 2 December we had that. 3 I don't recall talking to Dr. Hopkins at all 4 about considerations of warnings in the 2000s. 08:58:04 5 MR. ASHBY: There was a PowerPoint that you 6 used that was from like 2013 or something. 7 MR. MAIMON: All that I showed was an estimate 8 that they put on of exposures. That was all. The 9 numbers of exposures, I wrote them down on the -- on 10 the flip chart what their estimates were. 08:58:18 11 THE COURT: If you want to show me the 12 PowerPoint, I'll look at it. I don't want to try to -- 13 my memory is not that great. 14 MR. ASHBY: And there were other documents from 08:58:28 15 the 2000s. My fear and my biggest concern is that this 16 jury actually thinks, because they haven't heard it, 17 that Vermont talc is the talc that's being used all the 18 way up until now. They have to make a decision about 19 punitive damages; right? And they -- the way that the 08:58:45 20 evidence has come in because of the various court 21 rulings is that they don't know the talc that's 22 currently on the market is Chinese talc, and there is 23 lots of testing that shows, including from the 24 government, that it's clean and free of asbestos. 08:58:59 25 THE COURT: Let me ask a question here.</p>

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08:59:08	<p>1 Go ahead.</p> <p>2 MR. MAIMON: I actually thought that</p> <p>3 Dr. Hopkins testified that they used Vermont talc up</p> <p>4 until 2003 when they switched.</p> <p>5 THE COURT: I wonder if the way to deal with</p> <p>6 this issue is a stipulation by the parties that the</p> <p>7 talc at issue in this case, the Vermont talc, has not</p> <p>8 been used since 2003. That way we don't get into any</p> <p>9 of the stuff.</p> <p>10 MR. MAIMON: I mean, it's the truth, so we're</p> <p>11 willing to stipulate to it.</p> <p>12 THE COURT: That's very generous of you.</p> <p>13 MR. ASHBY: The problem of that, again, is that</p> <p>14 they've heard evidence from after that period</p> <p>15 suggesting about warnings and talking about warnings --</p> <p>16 THE COURT: You're going to have to show me</p> <p>17 what that is because I don't recall the specifics, and</p> <p>18 there's a dispute here about what was said. You need</p> <p>19 to show me what we're talking about. I'll look at</p> <p>20 that.</p> <p>21 In the meantime, parties let me know if you</p> <p>22 want to stipulate to telling the jury that fact. If</p> <p>23 you do, I'll tell them.</p> <p>24 MR. MAIMON: In light of that, Your Honor, I'm</p> <p>25 not going to go into his testing of Chinese talc. I</p>	09:01:26	<p>1 we're going to be litigating all the other documents</p> <p>2 and all the other depositions that we talk about</p> <p>3 Chinese talc.</p> <p>4 MR. MAIMON: Which is not this case.</p> <p>5 MR. SATTERLEY: Which is not this case.</p> <p>6 Exactly.</p> <p>7 THE COURT: Unless there's some showing that</p> <p>8 the door has been opened into the post-Vermont talc</p> <p>9 period, which I will look at an offer if there's some</p> <p>10 evidence of that. If that isn't there, we're not going</p> <p>11 past the control bottle. I want to hear if we have a</p> <p>12 stipulation or not on this issue in terms of these --</p> <p>13 of Vermont.</p> <p>14 MR. MAIMON: We'll wait here.</p> <p>15 THE COURT: You all chat about that. All</p> <p>16 right.</p> <p>17 So we're going to be on direct for a while, I</p> <p>18 presume.</p> <p>19 How long is the direct estimated?</p> <p>20 MR. SATTERLEY: One hour.</p> <p>21 MR. MAIMON: One hour, Your Honor.</p> <p>22 THE COURT: So that'll get us to the first</p> <p>23 break, one way or the other. We'll take a break there</p> <p>24 and before cross-X. If there's anything further</p> <p>25 defense counsel want to offer me, we can talk about it.</p>
Page 19		Page 21	
09:00:20	<p>1 appreciate and agree that counsel should be able to</p> <p>2 have Dr. Longo testify that he bought control samples</p> <p>3 off the shelf.</p> <p>4 THE COURT: That certainly is permissible.</p> <p>5 MR. MAIMON: And that they were "not detected"</p> <p>6 any asbestos in them. That's perfectly proper.</p> <p>7 MR. ASHBY: So I can ask about the control</p> <p>8 bottle that he bought in 2016 that's free of asbestos,</p> <p>9 but.</p> <p>10 MR. SATTERLEY: It's not free. It's nondetect.</p> <p>11 THE COURT: Whatever he will say. However he</p> <p>12 describes it, we'll find out.</p> <p>13 MR. ASHBY: It is nondetect.</p> <p>14 Can I -- let me ask it this way: Can I also</p> <p>15 ask him about the other off-the-shelf bottles that he</p> <p>16 has that were also nondetect?</p> <p>17 MR. SATTERLEY: That's going to open up all the</p> <p>18 once we found asbestos in it and then we're going to go</p> <p>19 down the whole Chinese talc that, you know,</p> <p>20 X percentage of them had asbestos, and we're going to</p> <p>21 be litigating, then, the Chinese talc issue, because</p> <p>22 you can't have it one way, only talk about the few</p> <p>23 bottles that he didn't find it in, in the Chinese talc,</p> <p>24 and not to be able to talk about all the bottles where</p> <p>25 he did find it, and then once they open up that, then</p>	09:02:23	<p>1 MR. SATTERLEY: If Your Honor makes a ruling</p> <p>2 with regard to this issue that impacts the Chinese</p> <p>3 talc, then we would request leave to reopen the direct</p> <p>4 examination to go down that -- we hope.</p> <p>5 THE COURT: I will consider that depending on</p> <p>6 what my ruling is.</p> <p>7 MR. ASHBY: I don't know if we'll be able to</p> <p>8 get the offer of proof together in time. We might not</p> <p>9 be able to release the witness.</p> <p>10 MR. MAIMON: Offer of proof on a stipulation --</p> <p>11 THE COURT: No, no, no. We're talking about</p> <p>12 what I said. The stipulation I would like to hear</p> <p>13 about, but -- the pushback on defendant is to cite me</p> <p>14 some testimony that they would argue opens the door.</p> <p>15 That's what I'm talking about.</p> <p>16 MR. MAIMON: We just need to know whether or</p> <p>17 not we have a stipulation that post 2003 was not</p> <p>18 Vermont -- was not Vermont.</p> <p>19 I think that's all we need; right.</p> <p>20 MR. ASHBY: Let me talk to Mike.</p> <p>21 THE COURT: What I suggest, why don't you guys</p> <p>22 talk about it and give me what language you want me to</p> <p>23 use rather than having me make the mistake of inventing</p> <p>24 something that nobody's happy with, which is usually a</p> <p>25 good result.</p>

6 (Pages 18 to 21)

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09:12:10	<p>1 All right. Do we have some agreement?</p> <p>2 MR. MAIMON: Plaintiffs have proposed the</p> <p>3 following language as a stipulation. The parties have</p> <p>4 stipulated that the source of talc for Johnson &</p> <p>5 Johnson talcum powder products after 2003 was no longer</p> <p>6 from the Vermont mines.</p> <p>7 And I think we have an agreement. Want to make</p> <p>8 sure.</p> <p>9 THE COURT: Doesn't look like we have everybody</p> <p>10 in the room here.</p> <p>11 MR. RICHMAN: Court's indulgence, Your Honor.</p> <p>12 So there's two issues, Your Honor.</p> <p>13 Scott Richman. Good morning, Your Honor.</p> <p>14 There's two issues. One, I don't think we</p> <p>15 necessarily have an issue with this sentence. I think</p> <p>16 the problem is that that's not the issue.</p> <p>17 The issue is sort of twofold. One, plaintiffs</p> <p>18 had made this an issue since they are pursuing punitive</p> <p>19 damages in this case, so obviously the question for the</p> <p>20 jury is what our conduct is. So the statement that</p> <p>21 Mr. Maimon read, while factually true, the jury is</p> <p>22 still speculating as to what is the product now. Is it</p> <p>23 the same, better, or worse than the Vermont talc, for</p> <p>24 example.</p> <p>25 Moreover, with respect to -- and the Court</p>	09:14:28	<p>1 So not only did Mr. Satterley's question,</p> <p>2 unlike some other ones where he did limit it to the</p> <p>3 time at issue with Ms. Leavitt's alleged exposure,</p> <p>4 these -- there was opinion testimony offered by</p> <p>5 Mr. Egilman upon questioning by plaintiff's counsel</p> <p>6 which had no limitation as to time. So, therefore, the</p> <p>7 question as to "did we ever warn" has been opened by</p> <p>8 plaintiff's counsel. That I set as an aside from the</p> <p>9 fact that I think that -- and it's always been an issue</p> <p>10 since plaintiffs are pursuing punitive damages.</p> <p>11 MR. MAIMON: With regard to Dr. Egilman, that</p> <p>12 was on the first day of his testimony, Your Honor. If</p> <p>13 Mr. Richman is correct, the doctor didn't mention</p> <p>14 asphyxiation. The Court has now instructed the jury</p> <p>15 with that testimony with regard to warn -- the need to</p> <p>16 warn about asphyxiation or even asphyxiation has been</p> <p>17 stricken. So that's no longer -- that's not a problem</p> <p>18 here. But, more to the point, the Court asked us if we</p> <p>19 could stipulate that the source of the talc ore, the</p> <p>20 talcum powder products by Johnson & Johnson after 2003,</p> <p>21 was no longer Vermont, and I think there's a</p> <p>22 stipulation that that is true.</p> <p>23 And so we can go forward with Dr. Longo's</p> <p>24 testimony in that -- under that framework.</p> <p>25 MR. RICHMAN: I think we're reading it</p>
Page 23		Page 25	
09:13:27	<p>1 asked for a proffer and I'm trying to -- frankly,</p> <p>2 scrambling to find what we're referencing. And at</p> <p>3 least as one reference, Mr. Satterley on January 24,</p> <p>4 2019, asked -- this was to Mr. Egilman.</p> <p>5 And there was a question: "Want to switch</p> <p>6 gears and talk about warnings here. Have you reviewed</p> <p>7 Johnson & Johnson documents with regard to warnings?</p> <p>8 "Answer: Yes. And I was at the deposition of</p> <p>9 the person who was in charge of creating them."</p> <p>10 And then:</p> <p>11 "Question: Johnson & Johnson's person?</p> <p>12 "Answer: Mrs. Musco.</p> <p>13 "Question: And you have opinions with regard</p> <p>14 to whether or not from a warnings perspective and a</p> <p>15 public health perspective whether Johnson & Johnson</p> <p>16 adequately warned regarding the dangerous nature of its</p> <p>17 products?"</p> <p>18 Mr. Brown objected.</p> <p>19 The Court overruled the objection.</p> <p>20 The witness said: "Yes."</p> <p>21 "Mr. Satterley: What is that opinion?</p> <p>22 "Objection. Same ruling.</p> <p>23 "Witness: Two opinions. They did not warn</p> <p>24 about agreed hazards of the products."</p> <p>25 Then he went on to talk about asphyxiation.</p>	09:15:34	<p>1 differently. I think the issue was whether it would be</p> <p>2 fair game for us to inquire into.</p> <p>3 So, as I indicated, we don't have an issue with</p> <p>4 that stipulation necessarily, but that doesn't change</p> <p>5 our position that the testing of Chinese talc the</p> <p>6 plaintiffs had made relevant numerous times, not only</p> <p>7 by their own questioning of Dr. Egilman without</p> <p>8 limiting the time, and specifically in response to</p> <p>9 Mr. Maimon's point, the witness's exact opinion as to</p> <p>10 his opinions, it was, quote, two opinions. They did</p> <p>11 not warn about agreed hazards of its products. That</p> <p>12 would have been asphyxiation, which was known since</p> <p>13 1922 that resulted in baby deaths.</p> <p>14 Secondly, they did not warn about the presence</p> <p>15 of accessory minerals that were carcinogens in the</p> <p>16 products that they knew of. So the witness was clearly</p> <p>17 separating the two opinions. So, while the Court did</p> <p>18 properly strike the opinions regarding asphyxiation,</p> <p>19 obviously, Dr. Egilman's opinions regarding warnings,</p> <p>20 which we objected to and which were, in fact,</p> <p>21 overruled, are still in front of the jury for their</p> <p>22 consideration.</p> <p>23 So that door has been opened a number of times</p> <p>24 by plaintiff's counsel.</p> <p>25 THE COURT: I don't want to have -- end this</p>

7 (Pages 22 to 25)

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09:16:38	<p>1 debate right now. So let me suggest the following: 2 We're going to go forward with Longo right now. 3 Right now we're not going into Chinese talc 4 issues. I am happy, if the parties want me to, if they 5 agree to give a stipulation about the source of talc. 6 If plaintiff wants to discuss with defendant an 7 agreement about what period of time they're claiming 8 lack of warnings in this case, you're welcome to do 9 that and I'll leave that to you all to discuss one way 10 or the other. 11 We have some -- before we get to 12 cross-examination, and I certainly, if the issue of 13 Chinese talc becomes relevant for whatever reasons, I 14 will adjust the examination schedule to make sure 15 everyone gets a fair game to do that. For the moment, 16 we're not going into Chinese talc. And I'm not reading 17 any stipulations because it doesn't sound like there's 18 yet an agreement about stipulations. So I encourage 19 you all to sit down and talk about it. 20 All right. Let's bring in the jury. 21 (Whereupon, the jury having entered the 22 courtroom, the following proceedings were held:) 23 THE COURT: Good morning, everybody. 24 THE JURY: Good morning, Your Honor. 25 THE COURT: We're playing our scheduling</p>	09:20:50	<p>1 Q. And have we asked you to come to court and 2 share the conclusions of your testing of Johnson & 3 Johnson talc products? 4 A. Yes, you have. 5 Q. Okay. And I would like just as an outline to 6 talk about three points that we're going to talk about 7 today. One is asbestos in Johnson's Baby Powder and 8 specifically for the years 1966 through 1998, and 9 specifically regarding Korean talc and Vermont talc. 10 Are you prepared to talk to us about that, 11 Dr. Longo? 12 A. Yes, I am. 13 Q. And we've also asked you, and are you prepared 14 to speak about Johnson & Johnson testing of their talc 15 for the presence or absence of asbestos? 16 A. Yes, I am. 17 Q. And, finally, have we asked you and are you 18 prepared to discuss Terry Leavitt's asbestos exposure 19 from those products? 20 A. Yes, sir. 21 Q. Let's talk a little bit about your background, 22 and can you start with your educational background for 23 us? 24 A. Yes. I received a bachelors of science in 25 microbiology, a masters of science in material science</p>
Page 27		Page 29	
09:19:40	<p>1 musical chairs here. So right now Dr. Egilman is not 2 the next witness. We have a different witness right 3 now. Maybe he will come back later today or later, I 4 don't know yet now. 5 Counsel, are ready to call your next witness? 6 MR. MAIMON: Yes, thank you, Your Honor. 7 At this time plaintiffs call to the stand 8 Dr. William Longo. 9 WILLIAM E. LONGO, Ph.D. (for the Plaintiff) 10 sworn as a witness, 11 testified as follows: 12 THE CLERK: Please state and spell your name 13 for the record. 14 THE WITNESS: William Edward Longo, L-o-n-g-o. 15 DIRECT EXAMINATION BY MR. MAIMON: 16 Q. Good morning, Dr. Longo. 17 A. Good morning. 18 Q. Could you introduce yourself to the jury? 19 A. Yes, sir. My name is Bill Longo and I live in 20 Cumming, Georgia, which is one of the many suburbs 21 around Atlanta. 22 Q. Have we asked you to come to court to share 23 with the members of the jury your expert opinions about 24 several aspects of Terry Leavitt's case? 25 A. Yes, sir.</p>	09:21:54	<p>1 and engineering, and finally finished up with a Ph.D., 2 or doctorate, in material science and engineering, all 3 from the University of Florida. 4 Q. Can you explain for the members of the jury 5 what the specialty of material science is? 6 A. Well, quite simply, it's the study of 7 materials. And it's usually broken down into five or 8 six grids depending on what material scientist you talk 9 to. There's minerals, ceramics, polymers or plastics, 10 metals, metallurgies, composites where you may mix two 11 of these different types of materials to get a new type 12 of material, and biomaterials, which I spent a lot of 13 time in graduate school. Those were the things that 14 you implant into the body, such as intraocular lens if 15 you have cataract surgery, or, unlike me, since I spent 16 all my time as a nerd, you played athletics and later 17 in life you have to get a knee replacement or a 18 shoulder replacement or that sort of thing. So. And 19 there's material science in the biomaterials. It's 20 more about strength and biomechanic ability. 21 Q. After you obtained your Ph.D., can you trace 22 for us your professional history? 23 A. Yes, sir. When I graduated, I had started a 24 small company called Microanalytic -- excuse me -- 25 Micro Laboratories -- Microanalytical Laboratories,</p>

8 (Pages 26 to 29)

Page 30		Page 32	
09:23:26	1	actually. And we were one of the first asbestos	1 synthesis. So it covers a broad range.
	2	testing labs in the country that specialized in	2 Q. You may -- I think you might be the first
	3	analyzing air filters by transmission electron	3 expert in our trial to talk about industrial hygiene.
	4	microscopy.	4 Just briefly tell us, what is industrial hygiene?
	5	Q. When was that?	5 A. Industrial hygiene can be broken down into four
	6	A. 1984, I believe that was.	6 points. As the word goes, industrial, so it usually
	7	Q. Go ahead.	7 has to do with folks who have worked at a workplace:
	8	A. I still needed a day job, so I stayed on at the	8 factory, chemical plant, what have you. An industrial
	9	University of Florida as a post-doctoral associate.	9 hygienist is supposed to be able to anticipate a
	10	Anybody that's familiar with that, it really means	10 problem. And I'll exaggerate the problems. Walk
09:23:38	11	cheap labor for the universities. But it was a good	11 into -- walks into a manufacturing facility that is
	12	experience.	12 making carburetor plant using solvents. And they smell
	13	So then I -- I finally was promoted to visiting	13 that kind of sweet smell some of these solvents have, a
	14	assistant professor.	14 new car smell, which we all trigger -- you know, it's
	15	And then I left and went to Atlanta and started	15 not really that good for you. So they try to replace
	16	Materials Analytical Services. And that was in --	16 that. I smell volatile -- potential volatile organic
	17	opened the doors in 1988 and I've been there ever	17 compounds, so the next thing is to, okay, let me tell
	18	since.	18 evaluate do this. Do some basic air sampling, try to
	19	Q. And what position do you have with Material	19 track it down. Do the air sampling, analyze it, and
	20	Analytical Services or what we'll call MAS?	20 go, okay, what do we have? We have these types of
09:24:08	21	A. I am the president.	21 organic compounds. What does that mean? Used in the
	22	Q. And we'll talk a little bit about the	22 process.
	23	laboratory and its facilities, but are you a member of	23 So the third step would be remediation. That
	24	any professional associations?	24 means it would be anticipation, the measurement, and
	25	A. Yes, sir. I'm a member of the American	25 then the remediation part of it, and then the -- make
Page 31		Page 33	
09:24:36	1	Industrial Hygiene Association.	1 sure it doesn't happen again, change some of the
	2	I'm a member of the Materials Research Group.	2 procedures of the process. That's what industrial
	3	I'm a member of Microanalysis Microprobe	3 hygienists do.
	4	Microscopy Group.	4 Q. In the course of your responsibilities, your
	5	I'm a member of the American -- no longer	5 professional responsibilities, is it part of your
	6	called the American Society of Testing Materials. It's	6 practice to remain up-to-date and review industrial
	7	now ASTM International.	7 hygiene literature?
	8	I am a member of -- there's a couple more.	8 A. Yes, sir. But primarily in the area that I
	9	There's the Ceramics Society.	9 have interest in, I have been working on for years. So
	10	I'm a member of the American Chemical Society.	10 most of it has to do with some type of air sampling for
09:24:50	11	And a few others.	11 asbestos or protocols for that. So that's what I tried
	12	Q. The first organization that you mentioned was	12 to keep up-to-date on.
	13	the American Industrial Hygiene Association.	13 Q. And have you participated in publications which
	14	What is that?	14 deal with industrial hygiene aspects of exposure to
	15	A. That's a trade group designed to help develop	15 asbestos?
	16	industrial hygienists. They're also the group that is	16 A. Yes, I have.
	17	the governing body of getting you to become a certified	17 Q. Have you made presentations to colleagues at
	18	industrial hygienist. They have conferences. So it's	18 professional gatherings concerning these issues?
	19	a scientific community of folks interested in	19 A. Yes, sir. Typically all around asbestos.
	20	industrial hygiene. And not just asbestos. It's all	20 Q. And have you actually conducted studies from an
09:25:02	21	types of potential exposures like volatile organic	21 industrial hygiene perspective to assess exposure to
	22	compounds, VOCs, or particulates. Even when officers	22 asbestos from various products?
	23	now raid a meth lab, there's all types of industrial	23 A. We have.
	24	hygiene protocols now for decontaminating those areas	24 Q. Okay. We mentioned publications.
	25	from all the different chemicals they use for	25 Have you published in the peer-reviewed
Page 31		Page 33	
09:25:20	1	Industrial Hygiene Association.	1 sure it doesn't happen again, change some of the
	2	I'm a member of the Materials Research Group.	2 procedures of the process. That's what industrial
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	24	hygiene protocols now for decontaminating those areas	24 Q. Okay. We mentioned publications.
	25	from all the different chemicals they use for	25 Have you published in the peer-reviewed
Page 31		Page 33	
09:25:47	1	Industrial Hygiene Association.	1 sure it doesn't happen again, change some of the
	2	I'm a member of the Materials Research Group.	2 procedures of the process. That's what industrial
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	22	compounds, VOCs, or particulates. Even when officers	22 asbestos from various products?
	23	now raid a meth lab, there's all types of industrial	23 A. We have.
	24	hygiene protocols now for decontaminating those areas	24 Q. Okay. We mentioned publications.
	25	from all the different chemicals they use for	25 Have you published in the peer-reviewed

Page 34		Page 36	
	1 scientific literature?		1 over time. If you go in a room that hasn't been --
	2 A. I have.		2 been in for a while, you got a little dust on the
	3 Q. And, specifically with regard to the subject of		3 surface, we want to see how much asbestos gets in that
	4 asbestos, could you tell us about generally how many		4 dust.
09:28:27	5 publications you have and what types of journals?	09:31:12	5 I was also on EPA's, when they existed,
	6 A. I would estimate on peer-reviewed publications		6 peer-reviewed group. There was four scientists from
	7 approximately a dozen going all the way back to the		7 this country and Canada that would meet every six
	8 research that I was doing at the University of Florida.		8 months, and we would go over EPA's research into areas
	9 So we have publications in more		9 of asbestos. We would give them what we thought should
09:28:47	10 pharmaceutical-type publications to the journal of	09:31:30	10 be addressed. We would look at what they were
	11 Cancer for our work we did on determining the		11 reviewing. We would peer review the contractors hired
	12 exposure -- potential exposure to folks smoking the		12 to do the testing for studies. That's pretty
	13 Kent cigarettes from the 1951 to '55 time frame when		13 interesting. We did that for three or four years. And
09:29:04	14 they were putting crocidolite in the filter, to the	09:31:46	14 I think the administration changed at one point and
	15 American Society for Industrial Hygiene, papers in		15 there was no more money for that.
	16 exposure potential from removing asbestos gaskets, to		16 Q. You mentioned ASTM.
	17 building exposures from the disturbance of materials		17 Have you had any roles in standards adopted or
	18 like fireproofing, asbestos fireproofing, or asbestos		18 put through ASTM?
	19 acoustical plasters. And we try to mimic how a worker		19 A. Yes, sir.
09:29:27	20 uses these products so that we can understand that,	09:31:57	20 Q. And specifically with regard to asbestos, could
	21 okay, when they do this, there may be this potential		21 you tell us what your roles have been?
	22 exposure.		22 A. The primary one is where I was the -- trying to
	23 So it really covers a broad range.		23 think of the word -- I was the person that was in
	24 But more -- most of it is in the area of		24 charge of getting one standard through. Again, it's
09:29:39	25 asbestos exposure or developing protocols for measuring	09:32:13	25 this method for determining the number of asbestos
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	1 asbestos.		1 fibers and bundles in settled dust, and it was the D22
	2 Q. Are you board certified in any areas?		2 committee, and we had 25 committee members, a hundred
	3 A. Yes, sir, I am.		3 subcommittee members, 125 committee members
	4 Q. Tell us about that.		4 specifically for that.
09:29:47	5 A. I'm a board certified forensic engineer, and	09:32:34	5 And then we had the general session, which
	6 recently I was given the title of diplomat. So I guess		6 was -- been a thousand, and then eventually that method
	7 there's nowhere to go in that organization.		7 goes out to all 40,000 members. It took six years to
	8 Q. Have you worked for any EPA groups with regard		8 get 25 scientists to agree on the language. I like to
	9 to asbestos engineering?		9 think I'm an okay scientist. I'll never be a
09:30:05	10 A. Yes, sir, I have.	09:32:57	10 politician. That's why I would never do that again.
	11 Q. Tell us about that, please.		11 But I still participated in that.
	12 A. I've been on two EPA working groups, science		12 And that -- that was in 1995, '96. I got, you
	13 groups. One of them was for a panel of scientists from		13 know, scientist appreciation of award stuff, and it is
	14 Canada in this country to help develop testing		14 still a standard today. It's the -- it is the D --
09:30:21	15 protocols for the Environmental Protection Agency using	09:33:17	15 D7755, I believe it is. Every TEM lab in the country
	16 things like scanning electron microscopes, but		16 that does asbestos analysis uses that method. And in
	17 primarily transmission electron microscopes for		17 every three or four years it has to be revalidated. It
	18 measuring asbestos in something as simple as settled		18 just doesn't stay in there forever. So that's now in
	19 dust in a building. Do you have asbestos up here, and		19 the works since 1996.
09:30:39	20 you want to know if you have to do some remediation	09:33:40	20 Q. Have you consulted for any governmental
	21 down here, you have to have a standard protocol for		21 agencies?
	22 removing the dust off the surface and then analyzing it		22 A. Yes, sir. We have consulted for the National
	23 so you can get some sort of information on how		23 Institutes of Health.
	24 contaminated that surface is because you can't see it,		24 We have done work for the Environmental
09:30:59	25 but you want to make sure -- all buildings have dust		25 Protection Agency.

10 (Pages 34 to 37)

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09:33:55	1 We have done work for the Center for Disease	1 We have numbers of optical microscopes.	09:36:30
	2 Control.	2 We have gas chromatographs, mass spectrometers.	
	3 We have done work for the Department of	3 Probably the only commercial lab in the country	
	4 Defense.	4 that has what we call a "triple quad liquid	
	5 We have done work for the FAA.	5 chromatography unit." And being a material scientist,	
	6 And it's -- and a lot of these are nonasbestos.	6 I did some mass spectrometry back in the day when they	
	7 The FAA was interesting.	7 were -- they did this whole area. So what that means	
	8 We have worked and consulted for the General	8 is, is when you inject something like a pharmaceutical	
	9 Services Administration, the United States Post Office	9 and it goes through a little column and gets to the	
	10 that deal with some issues they had dealing with	10 first mass spectrometer, you're literally blowing the	
	11 asbestos.	11 molecule up. So it's kind of like blowing a house up.	
	12 Trying to think if there's any other government	12 And then you go and then pick through the pieces and	
	13 agencies. I think that's it.	13 say, okay, we got copper pipe, we got this molecule, we	
	14 Q. Have you consulted for attorneys such as	14 got this, we got this. Once you blow up the first	
	15 myself, Mr. Satterley with regard to clients of ours in	15 time, it goes through the second triple squad. It has	
	16 claims that are made in litigation?	16 another mass spectrometer and so on and so forth.	
	17 A. Yes, I have.	17 The bottom line is it's very sensitive for	
	18 Q. Have you consulted for attorneys representing	18 pharmaceuticals testing. You have active ingredients	
	19 defendants in asbestos litigation?	19 right down to look at past parts per billion.	
	20 A. I have done that, too.	20 We have other material scientists.	
	21 Q. Have you tested products at the request of	21 We have physicists.	
	22 plaintiffs lawyers?	22 We have microbiologists.	
	23 A. We have.	23 We have biologists.	
	24 Q. Have you tested products on behalf -- at the	24 We have geologists.	
	25 request of defense lawyers?	25 We have mineralogists.	
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09:35:04	1 A. We have. Our lab will do for both sides. And	1 We have inorganic chemist.	09:37:43
	2 we try to call it like we see it. If they want us to	2 Organic chemist.	
	3 test it, they -- either defense or plaintiffs, they	3 Electron microscopists.	
	4 can't be unhappy with us if they're not happy with the	4 Scanning electron microscopist.	
	5 results.	5 Q. Do you call upon all of those facilities and	
	6 Q. Tell us a little bit about MAS. You say we do	6 all of those specialties in conducting your analyses	
	7 it. Tell us about your facilities, the specialties of	7 and speaking to them?	
	8 the people working under your supervision at MAS.	8 A. Yes. If it's routine analysis where we're	
	9 A. Yes, sir. MAS, is in Suwanee, Georgia, right	9 following protocols on everyday work --	
	10 next door to Cummings, Georgia, another suburb in	10 MR. BROWN: Bless you --	
	11 Atlanta. We have a 20,000 square-foot laboratory. We	11 THE WITNESS: -- it -- if they -- if they have	
	12 have approximately 42 people now. It's a material	12 a question. But on the more challenging stuff, we all	
	13 science organic chemistry.	13 get together and discuss it. And it's literally	
	14 We have four transmission electron microscopes,	14 sitting around a conference room. And a project will	
	15 all analytical transmission electron microscope. We	15 come in and we'll go, okay, this gasket failed, and	
	16 just added took an old one out and put a new	16 2200 gallons of organic material, liquid went into a	
	17 state-of-the-art one in. I don't like it as much	17 creek and obviously the gasket failed, who's had some	
	18 because it's all automated now. You sit in front of a	18 experience with this, and then we go, okay, what is	
	19 computer screen. And we have some of the younger	19 your hypothesis, what do you think happened? And then	
	20 microscopists. They love it. They have -- like a joy	20 we do the tests, prove it one way or the other. So I	
	21 stick, they can run it. I still like the knobs and the	21 get heavily involved in that.	
	22 floor and the screen.	22 My background is electron microscopy, optical	
	23 We have two scanning electron -- field emission	23 microscopy, so more of the challenging stuff, we're	
	24 electron microscopes. One of them is a state of the	24 involved, and we're continually trying to improve these	
	25 art and is also automated.	25 analyses, specifically how to get better and better	

11 (Pages 38 to 41)

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09:38:59	1	detection limits when you're looking for something.	1	just an interesting experience, because we have
	2	Q. Is your laboratory accredited?	2	auditors in there all the time. Nobody has ever said
	3	A. Yes, it is.	3	that they would prosecute us.
	4	Q. Tell us about the accreditations that your lab	4	Q. Good. Good. Talk to us about, you've tested
	5	has.	5	products for the presence of asbestos?
	6	A. We're accredited by the American Industrial	6	A. Yes, sir, I have.
	7	Hygiene Association.	7	Q. And tell us just the magnitude as far as the
	8	We're accredited by the National Voluntary	8	number of products that you have been involved in the
	9	Laboratory Accreditation Program.	9	testing of for asbestos?
	10	Q. That's NVLAP?	10	A. For individual asbestos samples that have
	11	A. That's NVLAP. Run by NIST.	11	arrived at our laboratory, I'll bet we have tested at
	12	We are ISO, International Standards	12	least maybe more now 400,000 individual asbestos
	13	Organization, accredited for quality control and for	13	products. We've been in business now for 30 years.
	14	doing specific analysis.	14	Q. And you talked to us about assessing asbestos
	15	We're also ISO accredited to accredit other	15	exposures.
	16	laboratories' testing for, especially VOCs for the	16	Has your laboratory been involved in asbestos
	17	green labeling material.	17	exposure assessments for use of products?
	18	We have an FDA number. You're not accredited	18	A. Yes, sir, we have.
	19	by the FDA, but you have to show a lot of different	19	Q. And tell us about, you know, how many of those
	20	things that you do.	20	types of assessments have you made?
	21	And all these accreditations have audits.	21	A. We have probably done over 150 of those where
	22	Typical audit is they'll let you know in two months	22	we get asbestos products that have been manufactured
	23	they're sending in an auditor and he's going to arrive	23	maybe in the '40s, '50s, and '60s. And it's sort of
	24	on this day and is he okay, do you have conflicts with	24	like antique hunting: find these specimens or these --
	25	him. They're all like that. Except the FDA.	25	we call them "exemplars" -- that were manufactured,
Page 43		Page 45		
09:40:19	1	Q. They show up when they want; right?	1	say, 1973, it's never been out of the box, it's never
	2	A. Yeah. You know you have an audit with the FDA	2	been out of the bag. And then we have a -- two rooms
	3	when your assistant calls you at ten minutes to 8:00	3	that have been specially designed that we can do the
	4	and says, there's two FDA agents here for your audit.	4	testing in it, just like workers would have done.
	5	That was an experience.	5	For example, asbestos-containing joint compound
	6	Q. And you do have your FDA number; right?	6	going up on drywall. This containment room where you
	7	A. We do have an FDA number. And all the auditors	7	can work in has windows, you can videotape as to all
	8	they do a debriefing at the end. I have yet to have	8	the proper procedures that if asbestos is released in
	9	one where they didn't say, okay, well, you just -- you	9	is not released to the outside. It's scrubbed. The
	10	need to do this.	10	workers are "investigators," I call them, including me
	11	The debriefing after FDA is you may get a	11	at times. You know, we have full-face respirators,
	12	letter, fixing a few things, and you have a few things.	12	supplied air, Tyvek suits, Tyvek-type suits under work
	13	Or you may get a 486, and that's like the most	13	clothes. We take all the precautions. Then we use
	14	terrifying thing you can say to a lab that has an FDA	14	these products just like they used to be used: mix it
	15	number because then they have you write everything	15	up the joint compound, put it on, let it dry, come back
	16	down, type it on your letterhead what they found wrong,	16	and sand it, and see specifically what the exposures
	17	and they publish it.	17	are. That room is 20-by-15-by-8.
	18	Then they went to a part that I wasn't	18	Then we have another, I'll call it a "room"
	19	anticipating. They said, we can lock your lab up. Or	19	that we can use larger projects in. Say, we're going
	20	we can prosecute you.	20	to put a car in there or a truck. It's 66 feet long,
	21	And I went, does that mean the president?	21	42 -- 44 feet wide and 20 feet tall. We move
	22	Yes. I'm not saying anything that's going to	22	45,000 cubic feet of air through there every hour, four
	23	happen. But that's what --	23	times an hour so we can keep the ventilation. And
	24	I'm going, why am I doing this anyway?	24	we've done things in there like cut a big section of
	25	But anyway it was all -- it was good. It was	25	concrete pipe with a chop saw to see how the exposure

12 (Pages 42 to 45)

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<p>1 is more realistic out in the real world than somebody 2 out in the field. 3 We use all the standard protocols for 4 measurement. Take air samples, analyze it, see what 09:44:20 5 the exposures are, use all the standard measurements 6 that you're -- you would do for a typical occupational 7 exposure and then write it up. 8 Q. Are your methods for analyses different 9 depending on whether or not you're working at the 09:44:34 10 request of a plaintiff's lawyer or a defense lawyer? 11 A. No, sir. We do the exact same thing for both 12 sides, so to speak. 13 Q. Have you published on these subjects in the 14 peer-reviewed literature? 09:44:45 15 A. Yes, sir, I have. 16 Q. Now, have you tested Johnson & Johnson products 17 for asbestos content and exposure assessment? 18 A. I have. 19 Q. And have you reviewed and considered Johnson & 09:44:57 20 Johnson and Imerys internal documents concerning those 21 subjects? 22 A. I have. 23 Q. And are you prepared to share your conclusions 24 from the perspective of material science, testing for 09:45:07 25 asbestos, and assessment of asbestos exposure from an</p>	<p>1 MR. DEJARDIN: Yes, Your Honor. 2 Can I voir dire? 3 THE COURT: You may. 4 VOIR DIRE EXAMINATION BY MR. DEJARDIN: 09:46:38 5 Q. Good morning, Dr. Longo. 6 A. Good morning, sir. 7 Q. You told the ladies and gentlemen of the jury 8 that you are a material scientist it; right? 9 A. Yes, sir. 09:46:44 10 Q. And you are not here to testify about what 11 caused Mrs. Leavitt's mesothelioma; correct? 12 A. No, sir, I'm not. 13 Q. You don't do causation? 14 A. No, I do not. 09:46:59 15 Q. As far as the testing that you've done in this 16 case, of any of the talcs, none of that talc came from 17 Mrs. Leavitt; correct? 18 A. That is correct. Other than I would say 19 from -- other than her lung tissue, no, we didn't get 09:47:19 20 any samples of her talc. 21 Q. And I'll clarify. None of the -- any of the 22 bottles or samples of actual talc that you've tested 23 came from Mrs. Leavitt; correct? 24 A. Oh. That is correct. 09:47:31 25 MR. DEJARDIN: Your Honor, can we have a</p>
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<p>1 industrial hygiene perspective? 2 A. Yes, sir. 3 MR. MAIMON: Your Honor, at this time I would 4 offer... 09:45:23 5 BY MR. MAIMON: 6 Q. In addition to looking at exposures and actual 7 products, does your laboratory analyze tissue, human 8 tissue, to determine the presence or absence of 9 asbestos and how much is there? 09:45:37 10 A. Yes. We do it quite regularly. 11 Q. Are you involved in supervising that work? 12 A. Yes. All the work done at MAS ultimately goes 13 through me. Ultimately, I set up the procedures and 14 protocols, and when we're working on an analytical 09:45:55 15 problem, I'm typically -- myself and the other -- one 16 other senior scientist will go through and go, okay, 17 this is -- this is our plan-type thing. So I'm 18 involved in all of it, especially things like tissue 19 analysis. 09:46:09 20 MR. MAIMON: Your Honor, at this time we would 21 offer Dr. Longo as an expert in material science, 22 testing for asbestos, both in bulk samples, air 23 samples, and tissue, and, finally, with regard to the 24 assessment of asbestos exposure from an industrial 09:46:25 25 hygiene perspective.</p>	<p>1 sidebar real quick? 2 THE COURT: Okay. 3 (Whereupon, the Court and counsel, having 4 convened in the Court's chambers out of the presence of 09:48:28 5 the jury, the following proceedings were held:) 6 THE COURT: Okay. 7 MR. DEJARDIN: Thank you, Your Honor. So the 8 issue -- and I just want to discuss it really 9 quickly -- is plaintiff's counsel mentioned three areas 09:48:40 10 that he was going to use Dr. Longo for. They were 11 testing of asbestos -- or testing of products from 1966 12 to '98. Two was testing of talc in general. Right? 13 THE COURT: I'm not sure what you're referring 14 to because that wasn't what the testimony was just now. 09:48:58 15 MR. DEJARDIN: Those are the three things he 16 had written up on the board as far as what he was -- 17 MR. SATTERLEY: But that's not the offer. 18 MR. MAIMON: I offered him as an expert in 19 material science, testing for asbestos in samples air 09:49:08 20 and tissue, and the assessment of asbestos exposure 21 from an industrial hygiene perspective. 22 That was the offer as an expert. 23 MR. DEJARDIN: The last point that I was going 24 to make was -- and I thought on the board he had 09:49:19 25 written Mrs. Leavitt's exposure to asbestos.</p>

13 (Pages 46 to 49)

<p style="text-align: right;">Page 50</p> <p>1 And he doesn't have any foundation to talk 2 about what Mrs. Leavitt was actually exposed to because 3 he hasn't tested anything that she actually used. He 4 can testify about what his testing with respect to 09:49:34 5 Johnson & Johnson Baby Powder or Imerys talc was, but 6 he cannot attach it to Mrs. Leavitt because she didn't 7 use any of the products that he actually tested. And 8 we already have -- and we already have -- 9 THE COURT: I think this might be a little 09:49:49 10 premature, because I don't know what they're going to 11 ask. Obviously, if they ask him, what did Ms. Leavitt 12 actually use, he's already indicated he doesn't have 13 her bottles. 14 But if the testimony is, I've looked at the 09:50:01 15 samples of these, and they had whatever asbestos, 16 accordingly, you know, that was what was out there. 17 MR. MAIMON: He has reviewed her testimony -- 18 MR. SATTERLEY: Testimony. 19 MR. MAIMON: He's done assessments of her use 09:50:18 20 of the product. That was all disclosed. And he was 21 deposed on it, so I'm going to ask him about those 22 issues. 23 MR. DEJARDIN: And I have no problem with that. 24 And he has read that stuff. It's just that he cannot 09:50:29 25 connect any of his asbestos that he's found in any talc</p>	<p style="text-align: right;">Page 52</p> <p>1 going anywhere near that or yet, and if we start 2 getting near it, raise an objection at that time. 3 MR. SATTERLEY: While we're here -- so can 4 we -- is there any other objection to his 09:51:36 5 qualifications as offered? 6 MR. DEJARDIN: No. That's the only thing I 7 had. 8 MR. SATTERLEY: Does J&J -- 9 MR. ASHBY: No. 10 MR. SATTERLEY: Okay. 11 THE COURT: I don't want to keep breaking it 12 up. Let's go. 13 (Whereupon, in chambers having concluded, the 14 following proceedings were held in open court in the 09:52:43 15 presence of the jury:) 16 THE COURT: Anything further, defense counsel? 17 MR. DEJARDIN: No, Your Honor. Thank you. 18 THE COURT: This witness will be accepted as an 19 expert on the topics of material science, testing for 09:52:53 20 asbestos, bulk air and tissue, and assessment of 21 exposure from an industrial hygiene approach. 22 With that in mind, Counsel, you may proceed. 23 MR. MAIMON: Thank you, Your Honor. 24 DIRECT EXAMINATION BY MR. MAIMON (Resumed): 09:53:03 25 Q. Dr. Longo, I'd like to just talk about what</p>
<p style="text-align: right;">Page 51</p> <p>1 product to Mrs. Leavitt because she didn't -- he didn't 2 test any of her products. 3 MR. SATTERLEY: That's not -- 4 THE COURT: That seems to me that's argument 09:50:40 5 and right now. At this preliminary qualification 6 stage, I don't see how that really comes into play at 7 this point. Nor until I actually hear what the 8 testimony is offered, whether he's offering opinion 9 without foundation or not. I understand your concern. 09:50:54 10 But I don't yet see that there's anything on the table 11 here for me to rule on. 12 MR. ASHBY: I think some of the concern here, 13 and I already talked to Mr. Maimon about this and he 14 can correct me -- is the extrapolation issue? 09:51:08 15 MR. MAIMON: He's not going to extrapolate 16 from -- he's not going to do an extrapolation, a 17 statistical extrapolation. 18 MR. DEJARDIN: That's as to the bottles just in 19 general, though. 09:51:17 20 MR. MAIMON: Your Honor, I've offered him as an 21 expert. 22 Can we move forward? 23 THE COURT: Let's hear what he actually says 24 when we get to it. But I understand. I'm sensitive to 09:51:25 25 the concern you have. Right now I don't know if we're</p>	<p style="text-align: right;">Page 53</p> <p>1 your opinions are and then we'll talk about the bases 2 for your opinions, okay? 3 A. Yes, sir. 4 Q. So, number one, have you reached a conclusion 09:53:13 5 with reasonable scientific certainty as to whether or 6 not Johnson's Baby Powder from 1966 to 1998, whether it 7 was sourced from Korea and, or Vermont, contained 8 asbestos? 9 A. I have reached a conclusion. 10 Q. And what is your conclusion? 11 A. That it does. 12 Q. And with regard to the testing by Johnson & 13 Johnson and for Johnson & Johnson of its products 14 during that period of time, have you reached a 09:53:40 15 conclusion as to whether or not any nondetect reports 16 or "no quantifiable asbestos detected" reports, whether 17 that changes your opinion on number one in any way 18 whatsoever? 19 A. No, none. None whatsoever. 20 Q. And then, finally, have you reached a 21 conclusion from an asbestos exposure assessment 22 perspective, from the perspective of industrial 23 hygiene, as to whether or not Mrs. Leavitt was exposed 24 to asbestos from her use of those products during that 09:54:09 25 period of time?</p>

14 (Pages 50 to 53)

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09:54:19	<p>1 MR. DEJARDIN: Objection. Foundation. 2 THE COURT: I'll let him state the opinion. So 3 overruled. We'll see. Subject to a motion to strike. 4 Foundation is not sufficient. 5 Go ahead. 6 THE WITNESS: Yes, I have. 7 BY MR. MAIMON: 8 Q. What's your opinion? 9 A. That she was. 10 Q. Let's -- before we talk about the bases, let's 11 talk about microscopes. You mentioned that you have 12 microscopes in your laboratory. Tell us about the 13 different types of microscopes and what types they are. 14 A. Well, we have three basic types -- well, two 15 basic types. 16 One microscope uses light as to magnify the 17 area of interest, usually a slide of some sort, has 18 glass lenses. And it's a very useful instrument. We 19 have a number of them. But it is limited somewhat 20 because of you're using light. Think of light as a 21 wave, and I'm exaggerating, of course, but it's -- 22 typical wavelength of light is this big (indicating). 23 And I'm trying to find something that big. Makes it 24 almost impossible. 25 So it's a very good workhorse, has its</p>	09:57:03	<p>1 while, and we had microscopes that we -- TEM 2 microscopes that we had bought that could easily 3 resolve 5 million, 6 million times. You could actually 4 see lattices of atoms through the semiconductor field. 5 That's its strength. You can see through it. Makes it 6 handy with asbestos because you're always looking at 7 internal structure. 8 Crystalline. You can get diffraction patterns 9 and understand what the crystals are. You can do 10 microchemistry. Its weakness is you can't put much in 11 there. 5,000 pound microscope, and the sample grid -- 12 probably already heard about, I don't know -- you can 13 fit on your finger. So you can only look at very small 14 amounts of material. 15 The last one we have is scanning electron 16 microscope. Again, I'll use my pilot green fiber. 17 Instead of going through the sample, the scanning 18 microscope scans with the beam over it. Sort of like 19 the old days how the TVs work, but not anymore. And as 20 it goes over, that electron beam hitting that sample 21 has enough energy to cause electrons to jump out. 22 And if it's on the top, it's going to get hit 23 more, get more electrons; on the sides, less, and 24 that's how you see it. It's like resolution. 25 So think of an x-ray. Where the x-ray is going</p>
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09:55:34	<p>1 strengths. Its weakness is resolution of smaller, 2 thinner fibers like you find in asbestos, just 3 individual fibers can't do it. In my opinion. 4 The other two instruments, main instruments, 5 are -- that we use is what we call "electron 6 microscopes." One is a transmission electron 7 microscope and the T of that part says "transmission." 8 So these are handy. Looks like a fiber thing. 9 So if you have -- you have a -- you use an 10 electron beam, typically a hundred, 120,000 volts. And 11 the energy hitting the filament where the electrons 12 come out causes it to literally jump. And then there's 13 a certain charge, negative, that pulls it down. Then 14 you have a set of glass lenses to focus. You have 15 electromagnetic lenses that use the magnetic field to 16 squeeze all these electrons into a little beam. 17 Then it goes through your samples transmitting. 18 So it's usually up here somewhere. And you're looking 19 at it down here (indicating). 20 The strengths are, since you're using electrons 21 to image what you're interested in, where if my 22 wavelength of light is this big, I could have an 23 electron sitting on my fingers, still wouldn't be able 24 to see it. So you can see much smaller things. So. 25 We had labs in the semiconductor field for a</p>	09:58:24	<p>1 through the skin part, a lot of it can go through, and 2 on the bone, it impedes it, so you get the contrast 3 built up. 4 Ours is a field emission scanning electron 5 microscope. In the old days, you could say, well, the 6 SEM can never get up to those high mags like the TEM. 7 Now they can. 8 And those were the three types of microscopes 9 we use. And specifically for asbestos. 10 Q. And with regard to those, can you give us an 11 estimate or a feel for how much a -- one of those TEMs, 12 the new ones, or the scanning electron microscopes, how 13 much do those cost? 14 A. The brand new field emission Hitachi 8230 with 15 the -- was \$1.1 million. 16 The brand new transmission electron microscope 17 was \$750,000. So you're close to, with everything, 18 \$2 million -- we call them "tools" -- for two new 19 tools. 20 Q. And do you -- or does MAS charge for your time 21 in testing products, doing exposure assessments, 22 reviewing documents, depositions, giving depositions, 23 testifying in trial? 24 A. I'll preface that by saying we have 25 41 employees that expect to get paid every two weeks.</p>

15 (Pages 54 to 57)

<p style="text-align: right;">Page 58</p> <p>09:59:50 1 We have insurance. We have overhead. We have 2 electricity bills. We have Workman's Comp insurance. 3 When the scientists go crazy and start looking at a 4 brand new field emission SEM, we have to look at, okay, 5 how are we going to pay for this. 6 So the answer to your question is: Of course. 7 Q. And have billings for your services -- or MAS 8 services in litigation over the 30 years that you've 9 been doing this work totalled about \$30 million? 10:00:07 10 A. Yes, our fees have totalled \$30 million in 11 30 years. 12 Q. If someone were to say that plaintiff's 13 lawyers -- and you've made \$30 million off of 14 plaintiff's lawyers, would that be accurate? 10:00:17 15 A. Personally? 16 Q. Yes. 17 A. No. I think you like me, but you don't like me 18 that well. 19 Q. With regard to the income that MAS gets from 10:00:31 20 the services that it gives to lawyers involve -- 21 involving litigation issues, how does that break out 22 between plaintiff's lawyers who retain you or defense 23 lawyers who retain you? 24 A. It's -- it was a little bit more on the defense 10:00:51 25 side, but now it's more even. Maybe a little bit more</p>	<p style="text-align: right;">Page 60</p> <p>1 THE WITNESS: Yes, Your Honor. 2 I've reviewed the testimony, I've reviewed the 3 depositions, I've reviewed J&J documents where they 4 specifically state, this is -- this is the country 10:02:35 5 where the Chungju talc was sold to, which included the 6 Philippines. 7 BY MR. MAIMON: 8 Q. And it included companies -- or places like 9 Thailand, Singapore, Japan as well; correct? 10:02:50 10 A. Hong Kong. 11 Q. Yes. 12 A. Essentially we call it the Asian talc for the 13 period of time that it was sourced from that mine in 14 Korea. 10:02:57 15 Q. And have you tested samples of that Johnson's 16 Baby Powder from that Asian talc? 17 A. Yes, sir, I have. 18 Q. Now let's just talk about that. 19 Do you have an opinion with reasonable 10:03:06 20 scientific certainty as to whether the Korean talc used 21 in Johnson's Baby Powder, sold in the Philippines in 22 the 1966 to 1968 time period contained asbestos? 23 A. I do have an opinion. 24 Q. What's your opinion? 10:03:19 25 MR. ASHBY: Foundation.</p>
<p style="text-align: right;">Page 59</p> <p>1 on plaintiff's side now. 2 Q. Want to make sure I have what I need. 3 So let's talk about Susan Leavitt. And with 4 regard to Mrs. Leavitt, did you review her mother -- 10:01:13 5 her testimony, her deposition testimony, and her 6 mother's deposition testimony? 7 A. Yes, sir. I read both volumes of Teresa's 8 depositions and I've reviewed the mother's depositions. 9 Q. And with regard to that, did you see that the 10:01:31 10 family lived in the Philippines from Teresa's birth in 11 1966, July 4, 1966, for a period of about 18 months? 12 A. Yes, sir. Then from there she moved to 13 California. I think San Francisco initially, then to 14 the Fremont area. 10:01:48 15 Q. And have you reviewed Answers to 16 Interrogatories from Johnson & Johnson as well as the 17 testimony of Dr. John Hopkins, the corporate 18 representative for Johnson & Johnson, that the 19 Johnson's Baby Powder sold in the Philippines during 10:02:04 20 that time period was sourced from the Korean mines, the 21 Chungju -- Chungju mine and sold by a company called 22 Il Shin Industrial? 23 MR. ASHBY: Objection. Hearsay. Foundation. 24 MR. SATTERLEY: Admission of a party opponent. 10:02:27 25 THE COURT: Overruled.</p>	<p style="text-align: right;">Page 61</p> <p>1 THE WITNESS: That it does. 2 MR. ASHBY: Objection. Foundation. 3 THE COURT: Overruled. 4 You may state your opinion. 10:03:26 5 THE WITNESS: My opinion is that it has 6 regulated asbestos in that mine. 7 BY MR. MAIMON: 8 Q. And can you tell us the bases for that opinion? 9 A. We'll start with that I analyzed historical 10:03:38 10 Johnson & Johnson -- Johnson's Baby Powder containers 11 for the source of the talc was from the Korean mine. 12 I've also researched and read peer-reviewed 13 publications in the scientific literature that 14 characterize that mine and found -- and stated the 15 exact same thing I'm stating now in those publications. 16 And I've looked at other documents that are 17 from the -- some of the suppliers and some of the other 18 companies that actually state themselves, this had 19 asbestos, fibrous tremolite, in it. 10:03:56 20 MR. ASHBY: Your Honor, move to strike hearsay. 21 THE COURT: Overruled. 22 BY MR. MAIMON: 23 Q. Now, let's talk about your testing of the -- of 24 the samples. 10:04:14 25 MR. MAIMON: May I approach, Your Honor? 10:06:07</p>

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<p style="text-align: right;">Page 62</p> <p>1 THE COURT: You may.</p> <p>2 MR. MAIMON: Thank you.</p> <p>3 (Whereupon, Plaintiff's Exhibit E-0519.36 was</p> <p>4 marked for identification.)</p> <p>5 (Whereupon, Plaintiff's Exhibit E-0519.38 was</p> <p>6 marked for identification.)</p> <p>7 (Whereupon, Plaintiff's Exhibit E-0519.91 was</p> <p>8 marked for identification.)</p> <p>9 (Whereupon, Plaintiff's Exhibit E-0519.119 was</p> <p>10 marked for identification.)</p> <p>10:06:21 11 BY MR. MAIMON:</p> <p>12 Q. Dr. Longo, I'm going to hand to you what I have</p> <p>13 marked as Plaintiff's Exhibit E-0519.36, .38, .91, and</p> <p>14 .119.</p> <p>10:06:36 15 And do you recognize those as samples for</p> <p>16 pictures of a bottle of this Asian talc that you tested</p> <p>17 as well as photographs of structures that you</p> <p>18 identified under the microscope with regard to the</p> <p>19 testing that you performed on this bottle?</p> <p>10:06:55 20 A. Yes, sir, it is.</p> <p>21 MR. MAIMON: Your Honor, we would offer those</p> <p>22 exhibits into evidence.</p> <p>23 MR. ASHBY: Objection. Foundation. Hearsay.</p> <p>24 THE COURT: Let's go one by one and establish</p> <p>10:07:06 25 foundation.</p>	<p style="text-align: right;">Page 64</p> <p>1 We received samples that they took out of the</p> <p>2 container, and I have the chain of custodies that show</p> <p>3 exactly the day they split it, how much, et cetera.</p> <p>4 MR. MAIMON: Your Honor, we would offer these</p> <p>10:08:35 5 into evidence.</p> <p>6 MR. ASHBY: Same objection.</p> <p>7 THE COURT: Overruled.</p> <p>8 We will admit them, too, in evidence</p> <p>9 Exhibits 519.36, .38.</p> <p>10 (Whereupon, Plaintiff's Exhibit E0519.36 was</p> <p>11 received into evidence.)</p> <p>12 (Whereupon, Plaintiff's Exhibit E0519.38 was</p> <p>13 received into evidence.)</p> <p>14 THE COURT: We haven't talked about 91 and 119</p> <p>10:08:52 15 yet.</p> <p>16 BY MR. MAIMON:</p> <p>17 Q. With regard to .91 and .119, are those pictures</p> <p>18 that you took under the microscope of what you found in</p> <p>19 this sample of Johnson's Baby Powder?</p> <p>10:09:10 20 A. The one with the color, that's the polarized</p> <p>21 light microscope. That was taken in my facility by,</p> <p>22 you know, our scientists, and then the next one is a</p> <p>23 transmission electron microscope. An analytical TEM</p> <p>24 photograph.</p> <p>10:09:21 25 MR. MAIMON: Your Honor, we would offer those</p>
<p style="text-align: right;">Page 63</p> <p>1 MR. MAIMON: Sure.</p> <p>2 BY MR. MAIMON:</p> <p>3 Q. With regard to these pictures, the two</p> <p>4 photographs, .36 and .38, are those photographs that</p> <p>10:07:18 5 were supplied to you together with samples of talc that</p> <p>6 were produced by Johnson & Johnson and which you</p> <p>7 analyzed?</p> <p>8 A. Yes, sir, it is.</p> <p>9 Q. And do you have -- do you have chains of</p> <p>10:07:31 10 custody with regard to those samples -- with regard to</p> <p>11 those samples having been produced by Johnson &</p> <p>12 Johnson?</p> <p>13 A. Yes, sir. These photographs are the exact same</p> <p>14 photographs that I have for that particular sample. I</p> <p>10:07:47 15 checked their chains of custody when Johnson & Johnson</p> <p>16 sampled out of these containers and then ultimately</p> <p>17 sent them to me.</p> <p>18 These photographs have my numbers on them.</p> <p>19 Specifically, if you looked at M69248, on the bottom is</p> <p>10:08:06 20 our laboratory tracking number for this particular</p> <p>21 sample. So these photographs were taken by my</p> <p>22 laboratory and I reviewed these photographs.</p> <p>23 Q. And were these produced by Johnson & Johnson in</p> <p>24 litigation out of their historical supplies?</p> <p>10:08:20 25 A. Yes, sir. We did not receive the container.</p>	<p style="text-align: right;">Page 65</p> <p>1 into evidence.</p> <p>2 MR. ASHBY: No objection.</p> <p>3 THE COURT: Admitted.</p> <p>4 (Whereupon, Plaintiff's Exhibit E0519.91 was</p> <p>5 received into evidence.)</p> <p>6 (Whereupon, Plaintiff's Exhibit E0519.119 was</p> <p>7 received into evidence.)</p> <p>8 BY MR. MAIMON:</p> <p>9 Q. So let's just talk about how you did all this,</p> <p>10:09:30 10 and could you tell us the process that you went in to</p> <p>11 testing these products -- and we're going to talk about</p> <p>12 others -- did you employ the same process as far as the</p> <p>13 preparation of the samples and the analysis of the</p> <p>14 samples?</p> <p>15 A. Yes.</p> <p>16 Q. Can you describe it for us?</p> <p>17 A. The basic instruments, tools that we use to</p> <p>18 analyze the cosmetic talc from these samples was the</p> <p>19 polarized light microscope, as well as the analytical</p> <p>10:10:04 20 transmission electron microscope, as well as XRD, or</p> <p>21 x-ray diffraction, that we sent to another laboratory.</p> <p>22 The type of polarized light analysis we did,</p> <p>23 we followed two standard -- international standard</p> <p>24 organization procedures for the PLM and TEM, and one of</p> <p>10:10:24 25 the PLMs we followed a peer-reviewed published protocol</p>

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<p>1 in 1989-1990 that is now known as the "Blount PLM</p> <p>2 method," by Alice Blount.</p> <p>3 Q. Is that Dr. Alice Blount?</p> <p>4 A. Correct. So the polarized light microscope we</p> <p>10:10:42 5 looked at one set of samples where we did not do heavy</p> <p>6 liquid separation.</p> <p>7 Then we looked at polarized light microscopy</p> <p>8 again using Alice Blount's technique of heavy liquid</p> <p>9 separation.</p> <p>10:10:53 10 And then for the TEM, we used the ISO method,</p> <p>11 the 22262-2 method.</p> <p>12 Q. You mentioned heavy liquid separation and you</p> <p>13 assisted us in preparing an animation to show the</p> <p>14 members of the jury what the heavy liquid separation</p> <p>10:11:09 15 you did is.</p> <p>16 A. That's correct.</p> <p>17 Q. Is this the start of it?</p> <p>18 A. That's the start of it.</p> <p>19 MR. MAIMON: Permission to publish, Your Honor?</p> <p>10:11:16 20 MR. SATTERLEY: For demonstrative purposes</p> <p>21 only, Your Honor.</p> <p>22 MR. ASHBY: We haven't seen this yet.</p> <p>23 MR. MAIMON: This was shown in opening</p> <p>24 statement.</p> <p>10:11:20 25 MR. DEJARDIN: I would object to it as hearsay.</p>	<p>1 screen.</p> <p>2 MR. MAIMON: I don't know why it's off, John.</p> <p>3 BY MR. MAIMON:</p> <p>4 Q. Is this animation --</p> <p>10:12:37 5 MR. MAIMON: Do we have it back up?</p> <p>6 BY MR. MAIMON:</p> <p>7 Q. Does this animation fairly and accurately</p> <p>8 depict the -- fairly and accurately depict the heavy</p> <p>9 liquid separation technique that you employed?</p> <p>10:12:57 10 A. It's a good demonstrative to kind of get a</p> <p>11 visual of what's going on in the process and why it's</p> <p>12 so valuable for what we're doing.</p> <p>13 MR. MAIMON: Permission to publish, Your Honor.</p> <p>14 THE COURT: You may publish. This is for</p> <p>10:13:10 15 demonstration purposes only. This is not being</p> <p>16 admitted into evidence.</p> <p>17 You may show it.</p> <p>18 BY MR. MAIMON:</p> <p>19 Q. If you can just tell us what's happening here?</p> <p>10:13:21 20 A. That's the centrifuge tube. If you get rid of</p> <p>21 that -- and that's the pipette. It's a heavy liquid,</p> <p>22 so you have the talc in there. And now it will be</p> <p>23 mixed. There we go. Keep mixing a little more. No.</p> <p>24 Didn't do it. And you put it in a centrifuge. And so</p> <p>10:13:42 25 what happens is the density of the liquid causes the</p>
<p>1 He didn't prepare it.</p> <p>2 THE COURT: It is being offered as</p> <p>3 demonstrative. Let's have a foundation about how this</p> <p>4 was prepared and what it purports to show before we</p> <p>10:11:31 5 show it.</p> <p>6 MR. MAIMON: Sure.</p> <p>7 BY MR. MAIMON:</p> <p>8 Q. Dr. Longo, did you assist us in instructing us</p> <p>9 as to what the method you used was to prepare the</p> <p>10:11:42 10 samples by heavy liquid separation?</p> <p>11 A. Yes. I was telling you that I had to show it</p> <p>12 sort of spinning. You had to show that there was a</p> <p>13 mixture of two things we could recognize. Then after</p> <p>14 the spinning saying the one -- particles would be at a</p> <p>10:11:59 15 different location at the bottom. And that's how heavy</p> <p>16 liquid density works.</p> <p>17 Liquid density means if you throw cork onto</p> <p>18 water, it floats. Cork has a lighter density. If you</p> <p>19 throw a ball bearing into water, it sinks, because it</p> <p>10:12:15 20 has a much higher density. So you got a bunch of stuff</p> <p>21 all mixed up and you want to separate them, you pick a</p> <p>22 density that will make one float and one go to the</p> <p>23 bottom of the centrifuge, too. And that's what we did</p> <p>24 here.</p> <p>10:12:28 25 Q. And was this animation -- it's no longer on the</p>	<p>1 talc to float to the top. Talc has a density of 2.5 or</p> <p>2 so, 2.6 grams per cubic centimeter, meaning every cubic</p> <p>3 centimeter, like a sugar cube of talc, will weigh</p> <p>4 2.6 grams.</p> <p>10:14:00 5 What we're looking for has a density of between</p> <p>6 2.8 -- we don't find those -- up to 3.0, 3.2. It</p> <p>7 pushes it all down to the bottom.</p> <p>8 Now, we can literally, what we call "reharvest</p> <p>9 the tip." You can stick a pipette in, take it out, a</p> <p>10:14:23 10 little -- thin, little blasts. Like a stopper. What</p> <p>11 we do is we flash freeze it in liquid nitrogen and cut</p> <p>12 the tip off and then use that to -- makes it a lot</p> <p>13 easier. We don't think we get as much talc in it.</p> <p>14 And that's simply how it works. It's -- heavy</p> <p>10:14:39 15 liquid separation of different minerals has been used</p> <p>16 for -- you can go back to the '30s and '40s --</p> <p>17 flotation. It's a well understood procedure.</p> <p>18 Q. Okay. And if we can now take a look at</p> <p>19 0519.91.</p> <p>10:15:04 20 Can you tell us what it is that you found here</p> <p>21 and what significance it was with regard --</p> <p>22 A. If you could just turn it.</p> <p>23 Q. Sure.</p> <p>24 A. There we go.</p> <p>10:15:21 25 Q. And tell us what this is. And tell us what</p>

<p style="text-align: right;">Page 70</p> <p>1 relevance it is to the question that I asked you about 2 the Korean talc. 3 A. This is an optical micrograph of one of the 4 samples that we analyzed by the Alice Blount polarized 10:15:41 5 light microscopy method. And in this particular 6 photograph, the nice -- the really cool colors, is 7 we're doing what's known as the "sign of elongation," 8 which means, as you rotate the fiber, it will 9 turn typical -- or bundle in the case -- you're all 10:15:59 10 seeing bundles here. It measures -- the color will 11 measure the speed of the light going through and around 12 the crystal. And you have a -- certain colors for 13 certain types of asbestos. So it's one of the 14 diagnostics for things that we do to go through the 10:16:16 15 crystalline structure measurements and determine what 16 type of asbestos it is. (Reporter clarification.) I 17 think I said what kind of asbestos. 18 So this is a filter that's put in the polarized 19 light microscope. It's a gypsum filter, I think, in 10:16:36 20 it. It restricts light to a certain wavelength. I 21 think these particular ones are 530 nanometers. And 22 you get these beautiful colors. Some of the -- you 23 know, it's aesthetic -- these are the kind of things I 24 like to take pictures of, and if I had my way at my 10:16:54 25 house, I'd have them on the wall. That's not going to</p>	<p style="text-align: right;">Page 72</p> <p>1 Then you check the refractive indices, meaning 2 this is in a 1.605 fluid and not under sign of 3 elongation but under dispersion staining -- 4 Q. You'll have examples of that? 10:18:35 5 A. Yeah. Under dispersion staining, you look at 6 the colors for 1.605, you look at the temperature in 7 the room, the monitor, and you check and see if you 8 have either angular or concentric optical microscope, 9 then you literally look at a chart of what wavelength 10:18:54 10 at what color of a refractive indices. And they're all 11 very distinct. 12 And the last thing they do is to see if it 13 melts, because -- for one type of polymer will look 14 like chrysotile, but we're not dealing with that here. 10:19:07 15 And if you look at our sheets, you will see all 16 these optical properties that the analyst has to verify 17 what he's dealing with. 18 Q. So did you identify asbestos by PLM using the 19 heavy liquid separation in the sample? 10:19:21 20 A. We did. 21 Q. And these are just examples of some of the 22 structures that you identified; correct? 23 A. Correct. 24 Q. And just briefly, we'll put up 0519.119, and if 10:19:34 25 you can explain for us -- I don't know why that's a</p>
<p style="text-align: right;">Page 71</p> <p>1 happen. 2 Q. You have down here, actinolite-tremolite 3 elongation at 200 times. 4 A. Correct. 10:17:00 5 Q. How do you identify this as -- well, first of 6 all, what's -- what do you mean by 7 tremolite-actinolite? 8 A. Tremolite-actinolite is part of the solid 9 solution series. And you have to understand, this is 10:17:11 10 only one test out of four. You kind of go down the 11 line. You have to determine refractive indices, fluid. 12 You have to determine the sign of extinction, meaning 13 these -- these microscopes have two polarizing lights, 14 one -- you know, in two different directions. And once 10:17:32 15 you have a bundle of amphibole asbestos like this, you 16 have to rotate it to the north-south position to the 17 polarizers. So if you have this one here and this one 18 here (indicating), this one needs to lay -- this fiber 19 needs to lay like this. 10:17:51 20 If it is a monoclinic type and you start 21 rotating it, it goes extinct under cross polarization, 22 meaning you can't see it. We call it "oblique." If it 23 is the anthophyllite type, it won't do that until you 24 get it this way. That's one test. 10:18:12 25 Then you check the birefringence.</p>	<p style="text-align: right;">Page 73</p> <p>1 weird color here. 2 But what is that? 3 A. Well, that's a micrograph, optical -- it's a 4 photograph of a tremolite fiber. Actually, that's a 10:19:55 5 bundle. 6 Well, you got rid of the green. 7 And it's right next to a grid opening, and that 8 one is 9.1 microns long and the bundle is 1.3 microns 9 wide. 10:20:08 10 The holes are from the replica of the filter. 11 After we get done with the heavy liquid separation, we 12 have to filter it. 13 And right above it is a talc particle. 14 And that's an asbestos bundle that we have 10:20:25 15 detected in this particular sample. 16 Q. Okay. 17 MR. MAIMON: May I approach, Your Honor? 18 THE COURT: You may. 19 BY MR. MAIMON: 10:22:10 20 Q. Dr. Longo, I'm going to hand you what I've 21 marked as Exhibit E-0519.44, .134, .136, .140, .150, 22 and .156. 23 And do you recognize the first one, .44, as 24 another bottle of Korean talc that was sent to you from 10:22:43 25 the Johnson & Johnson historical samples and -- which</p>

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<p>1 you have a chain of custody confirming that for?</p> <p>2 A. Yes.</p> <p>3 Q. And are the other pages of .134, 136, 140, 150,</p> <p>4 and 156 photographs, either through light microscope or</p> <p>10:23:01 5 transmission electron microscope, of asbestos</p> <p>6 structures that you identified in that sample.</p> <p>7 A. Yes, sir.</p> <p>8 MR. MAIMON: Your Honor, we would offer these</p> <p>9 into evidence.</p> <p>10:23:11 10 MR. ASHBY: No objection.</p> <p>11 THE COURT: I'm sorry?</p> <p>12 MR. ASHBY: No objection.</p> <p>13 THE COURT: All of these documents -- 519.44,</p> <p>14 134, 136, 140, 150, and 156 -- are admitted.</p> <p>15 (Whereupon, Plaintiff's Exhibit E0519.44 was</p> <p>16 received into evidence.)</p> <p>17 (Whereupon, Plaintiff's Exhibit E0519.134 was</p> <p>18 received into evidence.)</p> <p>19 (Whereupon, Plaintiff's Exhibit E0519.136 was</p> <p>20 received into evidence.)</p> <p>21 (Whereupon, Plaintiff's Exhibit E0519.140 was</p> <p>22 received into evidence.)</p> <p>23 (Whereupon, Plaintiff's Exhibit E0519.150 was</p> <p>24 received into evidence.)</p> <p>25 (Whereupon, Plaintiff's Exhibit E0519.156 was</p>	<p>1 So if this was anthophyllite instead of</p> <p>2 tremolite-actinolite, you wouldn't see anything there.</p> <p>3 Literally it goes extinct at parallel extinctions.</p> <p>4 Tremolite-actinolite you just turn it anywhere from 2</p> <p>10:24:49 5 to 5 degrees.</p> <p>6 All this bright stuff you see around here is</p> <p>7 talc particles.</p> <p>8 Q. So, again, this is another asbestos structure</p> <p>9 you identified in the sample; correct?</p> <p>10:24:58 10 A. Correct. It's a bundle.</p> <p>11 Q. And just -- if you look at the next picture,</p> <p>12 .136.</p> <p>13 You mentioned bundles. What does this show us</p> <p>14 as far as the bundles of asbestos structures that you</p> <p>10:25:16 15 found in this sample of baby powder?</p> <p>16 A. It's -- this one -- it's a little hard to see</p> <p>17 it on here, but this structure is two -- this bundle is</p> <p>18 a little bit over 200 microns long. The individual</p> <p>19 fibers of these bundles are about .2 to .4, the</p> <p>10:25:40 20 individual fibers. So you're dealing with, in this</p> <p>21 particular one, the individual fibers in the bundle</p> <p>22 are, on the average, about 300 to 1. So this is a very</p> <p>23 fibrous bundle, which puts it in -- if you were going</p> <p>24 to just accept the counting rules as they are before us</p> <p>10:26:05 25 like microscopy, this aspect ratio meets one of the</p>
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<p>1 received into evidence.)</p> <p>2 BY MR. MAIMON:</p> <p>3 Q. And, again, it's your understanding, Doctor,</p> <p>4 that this is a -- the sample with the chain of custody</p> <p>10:23:27 5 indicates that it would have been the Korean talc that</p> <p>6 we talked about that supplied this; correct?</p> <p>7 A. That is correct.</p> <p>8 Q. I just want to go through a couple of pictures</p> <p>9 just to show us some things we didn't see before.</p> <p>10:23:39 10 Here is another kind of picture. What does it</p> <p>11 show us?</p> <p>12 THE COURT: What are you showing again.</p> <p>13 MR. MAIMON: This is .134.</p> <p>14 Thank you, Your Honor.</p> <p>10:23:51 15 THE WITNESS: If you could -- I think if you</p> <p>16 increase the magnification just a tad. There we go.</p> <p>17 This is another actinolite tremolite bundle,</p> <p>18 and this is called "dispersion staining," where -- I</p> <p>19 don't know where the "staining" came from because you</p> <p>10:24:08 20 don't do any staining, but dispersion staining is</p> <p>21 literally you take the aperture under the stage and</p> <p>22 close it down to reduce the light, and this allows you</p> <p>23 to look for the colors of -- in the refractive</p> <p>24 indices -- this is under 1.605 -- fluids, and it also</p> <p>10:24:32 25 allows you to -- the extinction angle.</p>	<p>1 criteria for an asbestiform. And every one of these</p> <p>2 analysis where we found asbestos structures like this,</p> <p>3 all the aspect ratios were over 20 to 1.</p> <p>4 Q. And, with regard to the asbestos that your</p> <p>10:26:24 5 laboratory identified in the Korean talc samples, was</p> <p>6 it asbestiform?</p> <p>7 A. Yes.</p> <p>8 Q. And...</p> <p>9 One second.</p> <p>10:28:33 10 MR. MAIMON: May I approach, Your Honor?</p> <p>11 THE COURT: You may.</p> <p>12 MR. MAIMON: Thank you, Your Honor.</p> <p>13 (Whereupon, Plaintiff's Exhibit E0519.67 was</p> <p>14 marked for identification.)</p> <p>15 (Whereupon, Plaintiff's Exhibit E0519.69 was</p> <p>16 marked for identification.)</p> <p>17 (Whereupon, Plaintiff's Exhibit E0519.235 was</p> <p>18 marked for identification.)</p> <p>19 (Whereupon, Plaintiff's Exhibit E0519.241 was</p> <p>20 marked for identification.)</p> <p>21 (Whereupon, Plaintiff's Exhibit E0519.243 was</p> <p>22 marked for identification.)</p> <p>23 (Whereupon, Plaintiff's Exhibit E0519.252 was</p> <p>24 marked for identification.)</p> <p>25 (Whereupon, Plaintiff's Exhibit E0519.261 was</p>

20 (Pages 74 to 77)

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<p>1 marked for identification.)</p> <p>2 BY MR. MAIMON:</p> <p>3 Q. I'm going to hand you, Dr. Longo, what I've</p> <p>4 marked as Exhibit E-0519.67, .69, .235, .241, .243,</p> <p>10:28:50 5 .252, and .261.</p> <p>6 And I'm going to ask you, does this -- are</p> <p>7 these photographs, the first two, of another bottle of</p> <p>8 Asian Johnson's Baby Powder produced by Johnson &</p> <p>9 Johnson with the chains of custody showing that they</p> <p>10:29:09 10 were produced and have the Korean talc in them and,</p> <p>11 together with the photographs, both by PLM and TEM, of</p> <p>12 the asbestos structure that you found in them?</p> <p>13 A. Yes.</p> <p>14 MR. MAIMON: Your Honor, I would offer these</p> <p>10:29:25 15 into evidence.</p> <p>16 MR. ASHBY: No objection.</p> <p>17 THE COURT: All admitted.</p> <p>18 (Whereupon, Plaintiff's Exhibit E0519.67 was</p> <p>19 received into evidence.)</p> <p>20 (Whereupon, Plaintiff's Exhibit E0519.69 was</p> <p>21 received into evidence.)</p> <p>22 (Whereupon, Plaintiff's Exhibit E0519.235 was</p> <p>23 received into evidence.)</p> <p>24 (Whereupon, Plaintiff's Exhibit E0519.241 was</p> <p>25 received into evidence.)</p>	<p>1 A. Six of the seven.</p> <p>2 Q. And what concentrations of asbestos did you</p> <p>3 find in those samples where you found asbestos?</p> <p>4 A. Using the polarized light microscopy, the</p> <p>10:30:38 5 regular -- I now call the "regular polarized light</p> <p>6 microscope method" where you don't use heavy liquid</p> <p>7 density, every sample the amount of asbestos present</p> <p>8 was below our detection limit. So nothing was</p> <p>9 detected.</p> <p>10:30:52 10 For the Blount PLM, six of the seven were</p> <p>11 positive, and the concentration of the</p> <p>12 tremolite-actinolite in there range from a, what we</p> <p>13 call "below .1 percent up to .3 percent estimated</p> <p>14 weight" by the Blount PLM of actinolite-tremolite.</p> <p>10:31:18 15 Q. Now, with below .1 percent, could you call that</p> <p>16 trace?</p> <p>17 A. Typically, we call trace below .1 percent.</p> <p>18 Q. Were you able to determine, even on that, where</p> <p>19 you would, on a weight percentage basis, it would be</p> <p>10:31:32 20 called trace, were you able to calculate the number of</p> <p>21 fibers per gram in the samples?</p> <p>22 A. Yes, sir. We have two of the six positives</p> <p>23 where we called it trace by the Blount PLM method, and</p> <p>24 one of the below trace has a concentration of 29,000</p> <p>10:31:57 25 tremolite asbestos fibers in bundles per gram, and the</p>
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<p>1 (Whereupon, Plaintiff's Exhibit E0519.243 was</p> <p>2 received into evidence.)</p> <p>3 (Whereupon, Plaintiff's Exhibit E0519.252 was</p> <p>4 received into evidence.)</p> <p>5 (Whereupon, Plaintiff's Exhibit E0519.261 was</p> <p>6 received into evidence.)</p> <p>7 BY MR. MAIMON:</p> <p>8 Q. Dr. Longo, did you identify fibrous tremolite</p> <p>9 in the Korean talc?</p> <p>10:29:36 10 A. Yes.</p> <p>11 Q. And did you identify fibrous talc in the Korean</p> <p>12 talc?</p> <p>13 A. Yes.</p> <p>14 Q. Can you tell us -- we've heard about cleavage</p> <p>10:29:44 15 fragments.</p> <p>16 When you identified the structures that you</p> <p>17 called asbestos, were they cleavage fragments?</p> <p>18 A. No.</p> <p>19 Q. The -- tell us about the concentration -- or</p> <p>10:29:55 20 the concentrations of asbestos that -- first of all,</p> <p>21 how many samples of Korean talc did you analyze?</p> <p>22 A. We received six separate samples from six --</p> <p>23 excuse me -- seven separate containers.</p> <p>24 Q. And in how many of them did your methodology,</p> <p>10:30:14 25 utilizing it, did you detect asbestos?</p>	<p>1 other trace one was at 45,000 asbestos fibers in</p> <p>2 bundles per gram of tremolite.</p> <p>3 Q. And despite the fact that that might be called</p> <p>4 trace by PLM, if you find those concentrations by TEM,</p> <p>10:32:18 5 would normal use of such a product result in a</p> <p>6 substantial exposure to asbestos?</p> <p>7 MR. ASHBY: Objection. Foundation.</p> <p>8 THE COURT: Let's lay some further foundation.</p> <p>9 MR. MAIMON: Sure.</p> <p>10:32:36 10 BY MR. MAIMON:</p> <p>11 Q. Doctor, have you considered from an industrial</p> <p>12 hygiene perspective, an exposure assessment of using --</p> <p>13 of normal use of such a product?</p> <p>14 A. Yes, sir, I have.</p> <p>10:32:45 15 Q. And have you taken into account the studies of</p> <p>16 exposure assessment that you've done as well as the</p> <p>17 literature on exposure assessment for such a product?</p> <p>18 A. Yes, I have.</p> <p>19 Q. And, based upon that, are you able to reach an</p> <p>10:32:58 20 opinion with reasonable scientific certainty as to</p> <p>21 whether or not a product with -- by PLM trace but the</p> <p>22 concentrations that you mentioned of fibers per gram,</p> <p>23 normal use would result in a substantial exposure to</p> <p>24 asbestos?</p> <p>10:33:15 25 MR. ASHBY: Same objection. Overbroad.</p>

21 (Pages 78 to 81)

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10:33:21	<p>1 THE COURT: Overruled. 2 THE WITNESS: Yes. 3 BY MR. MAIMON: 4 Q. What's your opinion? 5 A. That it will at these concentrations. 6 Q. Thank you. 7 Now, moving on from Asia, did you -- 8 MR. MAIMON: Oh, okay. 9 BY MR. MAIMON: 10 Q. The other samples, the ones that weren't by PLM 11 trace amounts, can you tell us what concentrations of 12 fibers per gram there were on the positives? 13 A. It ranged from -- let me go from low to high -- 14 35,000 to 65,000 fibers in bundles, primarily bundles 15 of regulated asbestos. 16 Q. Per gram? 17 A. Per gram. 18 Q. And just conversion, how many grams are there 19 in an ounce? 20 A. 28. 21 Q. And so, if we're talking about 30,000 -- 40 -- 22 50,000 let's just talk about in round numbers, if 23 you're talking about 50,000 fibers per gram, what we're 24 now talking about, how many would that make in an 25 ounce?</p>	10:35:27	<p>1 Q. And did you consider Ms. Leavitt's use of 2 Johnson's Baby Powder in the United States from 1968 3 until she stopped using the product in 1998? 4 A. Yes, sir, I did. 5 Q. And was it your understanding that, during that 6 time period, the source of talc for Johnson's Baby 7 Powder were the Hammondsville, Argonaut, Rainbow, and 8 Hamm mines in southern Vermont? 9 MR. ASHBY: Leading. Foundation. 10 THE COURT: Overruled. 11 THE WITNESS: Yes. According to the 12 documentation provided, that is a series of mines that 13 were used in Vermont. 14 BY MR. MAIMON: 15 Q. Did you review the documents, internal 16 documents from Johnson & Johnson and Imerys, concerning 17 those mines? 18 A. Yes, sir, I did. 19 Q. And based upon -- first of all, based upon the 20 internal documents from Johnson & Johnson and Imerys, 21 do you have an opinion with reasonable scientific 22 certainty as to whether the talc in those mines 23 contains asbestos? 24 A. I do. 25 Q. What's your opinion?</p>
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10:34:31	<p>1 A. Well, just because this will be a written 2 record and I'll get teased about it, I'm going to use 3 my calculator. If I'm wrong. So 50,000. 4 What's your hypothetical again? 5 Q. How many would that -- per gram, how many would 6 that make in an ounce? 7 A. 1.4 million -- 1,400,000. 8 Q. And if we're talking now about a 10-ounce 9 bottle, how many fibers are we talking about for that 10 10-ounce bottle? 11 A. 14 million. 12 MR. DEJARDIN: Foundation. 13 THE COURT: Hold on a second. 14 MR. ASHBY: Join. 15 THE COURT: I'm sorry. I didn't hear the 16 objection. 17 MR. DEJARDIN: Objection. Foundation, 18 Your Honor. 19 THE COURT: Overruled. 20 BY MR. MAIMON: 21 Q. Now, I'd like to move on from Korea to Vermont. 22 Did you test samples of Johnson's Baby Powder 23 containing Vermont talc? 24 A. Sorry. 25 Yes, sir, I have.</p>	10:36:22	<p>1 A. That it does. 2 Q. And can you tell us -- did you review 3 literature in that regard? 4 A. Yes. 5 Q. Did you review Johnson & Johnson, Imerys 6 documents? 7 A. Yes, I have. 8 Q. Did you conduct your own testing on bottles of 9 Johnson & Johnson Baby Powder produced out of 10 historical samples by Johnson & Johnson to confirm 11 that? 12 A. Yes, sir, I did. 13 Q. And what were your findings when you did your 14 own testing -- first of all, did you use the same 15 methods that you talked about with regard to the Asian 16 talc? 17 A. Yes. 18 Q. And did you perform the same type of analysis: 19 the PLM, the Blount PLM, the ISO 22262? 20 A. TEM, yes, we did. 21 Q. And can you tell us what your conclusion is 22 with regard to your own testing and the types of 23 asbestos that you found in the Johnson's Baby Powder? 24 MR. ASHBY: Overbroad as to time. 25 THE COURT: Overruled.</p>

22 (Pages 82 to 85)

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<p>1 THE WITNESS: Our tests show that we were -- on</p> <p>2 samples that were positive, we found both tremolite,</p> <p>3 regulated asbestos, what I -- the tremolite solid</p> <p>4 solution series, regulated asbestos. Anthophyllite,</p> <p>10:37:30 5 solid solution series, regulated asbestos. As well</p> <p>6 as -- one of the types of tremolites we found was</p> <p>7 richterite in one or two -- one or two regulated fibers</p> <p>8 of that. And we found it in various concentrations.</p> <p>9 So my opinion would be, yes, the Vermont Talc</p> <p>10:37:53 10 mines have regulated asbestos in them.</p> <p>11 BY MR. MAIMON:</p> <p>12 Q. And that regulated asbestos that you saw a</p> <p>13 reference to that in the documents?</p> <p>14 A. Yes.</p> <p>10:38:01 15 Q. And did you confirm by your own testing that it</p> <p>16 made its way into the final products?</p> <p>17 A. Yes, sir. I did.</p> <p>18 Q. Okay. The -- we'll talk a little bit about</p> <p>19 those, but I just want to cover one thing first.</p> <p>10:38:13 20 In addition to looking at samples yourself, did</p> <p>21 you validate the findings of J3 Resources Laboratory</p> <p>22 Mr. Lee Poye, who the jury has seen?</p> <p>23 A. Yes.</p> <p>24 Q. And tell us, did Mr. Poye come to your lab and</p> <p>10:38:28 25 did your laboratory look at his grids?</p>	<p>1 on that one. And so on, and so forth. It just makes</p> <p>2 the results, in my mind, more validated.</p> <p>3 Q. And, with regard to the samples that Mr. Poye</p> <p>4 had analyzed and you validated, did you calculate the</p> <p>10:40:10 5 concentration of asbestos in those samples in terms of</p> <p>6 fibers per gram?</p> <p>7 A. I did.</p> <p>8 Q. Can you tell us what those were, what the range</p> <p>9 of concentrations were?</p> <p>10:40:20 10 A. I can. As soon as I get to it.</p> <p>11 Q. Okay.</p> <p>12 A. The range of concentrations in his results was</p> <p>13 from 7,400 fibers/bundles per gram up to 95,000 fibers</p> <p>14 in bundles per gram of anthophyllite-type asbestos.</p> <p>10:40:47 15 Q. And with regard to those types of</p> <p>16 concentrations, based upon your experience and your own</p> <p>17 testing, would the normal use of a product containing</p> <p>18 those ranges of concentrations result in substantial</p> <p>19 exposure to asbestos?</p> <p>10:41:02 20 MR. ASHBY: Objection. Foundation. Overbroad.</p> <p>21 MR. DEJARDIN: Join.</p> <p>22 THE COURT: Overruled.</p> <p>23 THE WITNESS: In my opinion, yes.</p> <p>24 BY MR. MAIMON:</p> <p>10:41:08 25 Q. Okay.</p>
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<p>1 A. Yes, he did.</p> <p>2 Q. And were you able to validate the asbestos</p> <p>3 structures that he found in the Shower to Shower</p> <p>4 samples that he analyzed?</p> <p>10:38:41 5 A. Yes. He had 11 positive samples out of the</p> <p>6 16 containers. We were able to validate 9 of those</p> <p>7 positive samples out of the 11.</p> <p>8 Q. And the one that you weren't able -- the ones</p> <p>9 that you weren't able to validate, what difficulty did</p> <p>10:38:56 10 you have?</p> <p>11 A. The carbon film on the TEM grids had ripped,</p> <p>12 because they're literally a hundred angstroms thick,</p> <p>13 and both of those samples had 1 fiber, 1 regulated</p> <p>14 asbestos fiber, and it just so happened that that grid</p> <p>10:39:15 15 opening had ripped. So we couldn't validate the TEM on</p> <p>16 2 of the positives. But the other 9 we were able to</p> <p>17 validate. We came to the same conclusion that he came</p> <p>18 to that this was regulated asbestos fibers in bundles.</p> <p>19 Q. And in science, or your field, Dr. Longo,</p> <p>10:39:31 20 what's the importance of laboratories cross-validating</p> <p>21 each other's results?</p> <p>22 A. The results then can be stronger. You have two</p> <p>23 independent labs saying, yes, that is a tremolite --</p> <p>24 that is an anthophyllite bundle. We're getting the</p> <p>10:39:50 25 similar sizes you are, and we agree with your finding</p>	<p>1 THE COURT: Counsel, if you're going to move to</p> <p>2 another topic, we'll take our break here.</p> <p>3 MR. MAIMON: We can take a break, Judge.</p> <p>4 THE COURT: We'll take it now.</p> <p>10:41:18 5 (Recess taken.)</p> <p>6 (Whereupon, the following proceedings were held</p> <p>7 outside the presence of the jury.)</p> <p>8 THE COURT: Counsel, somebody needed to talk to</p> <p>9 me?</p> <p>10:53:17 10 MR. SATTERLEY: Yes, Your Honor.</p> <p>11 THE COURT: Why don't you wait outside,</p> <p>12 Dr. Longo.</p> <p>13 MR. SATTERLEY: Your Honor, based upon the</p> <p>14 argument of counsel this morning, plaintiff would be</p> <p>10:53:30 15 agreeable to counsel examining Dr. Longo on Chinese</p> <p>16 talc if a limiting instruction is given that this would</p> <p>17 only relates to punitive damages, and we're not</p> <p>18 suggesting Your Honor say "punitive damages." But to</p> <p>19 give a limiting instruction to -- that it would only</p> <p>10:53:49 20 relate to, for a limited purpose, solely to whether</p> <p>21 defendant's conduct involved a continuing pattern and</p> <p>22 practice.</p> <p>23 That's what the CACI instruction says with</p> <p>24 regard to punitives, and that's the only reason they</p> <p>10:54:03 25 raised this issue this morning is they say they need</p>

23 (Pages 86 to 89)

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<p>1 the jury as the judge, whether they continue to engage 2 in this pattern and practice, and so the limiting 3 instruction -- and Ms. Clancy just handed me this. 4 This is admitted solely -- this testimony, if they 10:54:18 5 start cross-examining on that, is admitted solely on 6 whether defendant's conduct involved a continuing 7 pattern and practice. This is not admitted or relevant 8 as to whether the talcum product to which Mrs. Leavitt 9 was exposed did not contain asbestos, Johnson & Johnson 10:54:35 10 talc products did not use talc from the Vermont mines 11 after 2003. 12 So a very simple limiting instruction so that 13 there's no confusion regarding the purpose of the 14 admissibility of that cross-examination on the -- on 10:54:52 15 the Chinese talc. 16 MR. RICHMAN: Two things, Your Honor. One, 17 we'll just have to take -- we haven't been provided a 18 copy of the proposed limiting instruction, so we'll 19 need to take a look at it and discuss it among counsel. 10:55:02 20 The reason I asked to talk to the Court, I 21 think the original question was, how has this door been 22 opened earlier? The Court asked for some specific 23 examples. And that's the issue I wanted to raise with 24 the Court. 10:55:13 25 There was two specific instances I wanted to</p>	<p>1 discontinuing use of talc from that ore body.' 2 "Do you see that?" 3 Then he goes on to say: 4 "Answer: I see what is written, yes." 10:56:49 5 MR. MAIMON: Can you just read -- 6 MR. RICHMAN: Let me -- let me finish my 7 argument. 8 So then also Mr. Satterley, not only in opening 9 statement -- let me point that passage up -- on page 55 10:57:03 10 said, quote, the evidence will be that Johnson & 11 Johnson knew of the -- 12 MS. CLANCY: I'm sorry. I'm just trying to 13 follow along with you. 14 MR. RICHMAN: Sure. This is Mr. Satterley's 10:57:11 15 opening statement. I believe it was January 9 -- 16 excuse me -- January 7th, on page 55. 17 So the evidence will be that Johnson & Johnson 18 knew of the asbestos risk and they continued to sell 19 their product. 10:57:29 20 And then later on, on page 58, he's talking in 21 the context of Shower to Shower. 22 MS. CLANCY: I'm sorry. I'm really trying to 23 go as fast as I can. So 55, line what? 24 MR. RICHMAN: I believe it's 18 through 23, and 10:57:44 25 in 58, on the context of Shower to Shower, he stated at</p>
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<p>1 raise with Your Honor -- actually, one with Mr. Maimon 2 and one with Mr. Satterley -- with respect to -- 3 Court's indulgence -- Judge, with respect to 4 Dr. Egilman when he was asked about warnings -- excuse 10:55:32 5 me. 6 MS. CLANCY: Could you give me what the date of 7 it is? 8 MR. RICHMAN: Sure. 9 MS. CLANCY: Thank you. 10:55:36 10 MR. RICHMAN: No problem. 11 So, Your Honor, let me start with Mr. Maimon's 12 question. When he was asking Mr. Hopkins -- and this 13 was, I'll explain -- January 28th. The excerpt was -- 14 this was -- I think the Court may recall, there was an 10:55:58 15 email that was shown which had an attachment about a 16 \$13 million verdict or something like that. The 17 attachment parts didn't come in and Mr. Maimon said he 18 just wanted to ask about another portion of it. And 19 the question that was asked of the witness on page 65, 10:56:20 20 line 21. 21 "Question:" 22 -- and this was to Dr. Hopkins from Mr. Maimon. 23 "And you see Mr. Hicks at the end of the first 24 paragraph that he writes on June 4, 2015, states, 'Even 10:56:31 25 one confirmed report of asbestos form would prompt</p>	<p>1 the end, "It also goes to pattern and practice that 2 they continuously did not warn about the dangerous 3 nature of the products." 4 Finally, there was questioning on 1/24/19 with 10:57:58 5 Dr. Egilman. This was Mr. Satterley, and he talked 6 about -- Court's indulgence. 7 This was the PowerPoint presentation he gave, 8 Your Honor, and he showed a page. And this was, 9 Ms. Clancy, around 162 to 165. And it was -- the 10:58:23 10 exhibit is -- I believe it's DE1076. And then the 11 question -- this is at page 162, lines 25. 12 "Question: Is this" -- and this was -- the 13 Court asked to lay some foundation. 14 "Question: Is this -- is this important with 10:58:41 15 regard to your warnings and anti-warnings opinions? 16 "Question: -- 17 "Answer: -- excuse me. 18 "Answer: Yes. 19 And Ms. Zou actually objected, saying, "This 10:58:51 20 PowerPoint" -- I think it's incorrectly reflected in 21 the transcript. It's -- it says, "List the exposures 22 at issue in this case." I think it was "postdates." 23 And then the Court asked for further 24 foundation. 10:59:04 25 Mr. Satterley indicated he would do it. And</p>

24 (Pages 90 to 93)

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1 the product, and that's a separate issue from the
2 punitive damages which have been at play.

3 So I think just looking at all -- the door has
4 been opened so many times, Your Honor, from the
11:01:10 5 beginning of the trial throughout the trial, it's,
6 frankly, fair examination by -- by co-counsel.

7 MR. MAIMON: Your Honor, the purposes of this
8 witness, we've already acceded that they should be able
9 to cross-examine him about his results of testing,
11:01:24 10 of --

11 MR. SATTERLEY: With a limiting instruction.

12 MR. MAIMON: -- Chinese talc. However the
13 relevance -- what it's relevant to, as counsel had
14 indicated in their argument, is the issue of punitive
11:01:34 15 damages, whether or not they continue to sell a product
16 that contains asbestos or not. That's the only issue
17 that it could be relevant to. It cannot be relevant to
18 the talc used by Mrs. Leavitt because she stopped in
19 1998.

11:01:46 20 So it can't be relevant to any issue of failure
21 to warn the plaintiff. It can't be relevant to any
22 question of the negligence and duty owed to the
23 plaintiff. It can't be relevant to any issue of
24 causation because it's not relevant -- it has
11:02:00 25 nothing -- the Chinese talc was not used for any of her

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1 exposure.

2 So the only issue that it can be relevant to is

3 the issue of punitive damages, pattern and practice,

4 which is what we -- but we don't have to deal with that

11:02:13 5 right now, and we can argue later on about what was

6 said by whom and when, but we've already acceded to the

7 testimony -- or the cross-examination of Dr. Longo

8 concerning Chinese talc.

9 But we think that there is an appropriate

11:02:26 10 limiting instruction as to what issue this is relevant

11 to.

12 MR. SATTERLEY: I'm handing a copy of the

13 written proposed instruction that I read into the

14 record to defense counsel, and we met and conferred in

11:02:39 15 the hallway 10, 15 minutes ago where I advised them of

16 this proposed instruction and that we would withdraw

17 our objection to the cross-examination on Chinese talc.

18 THE COURT: Let me just say a couple things. I

19 think defense counsel needs to review what you've got

11:02:54 20 there. First of all, I agree the door is open, as

21 plaintiffs have indicated. So some examination on

22 Chinese talc is appropriate. I think it is important,

23 though, so we don't get completely confused here, that

24 at least the jury be advised that there's no allegation

11:03:12 25 in this case that the Chinese talc was used with regard

<p style="text-align: right;">Page 98</p> <p>1 to Ms. Leavitt, that the Vermont talc use stopped as of 2 2003 or whatever the appropriate date is. So, 3 accordingly, the testimony about Chinese talc does not 4 relate to the claims that Mrs. Leavitt has brought 11:03:33 5 about her exposure. 6 Whether or not I use the term "pattern and 7 practice" or not, I'm not sure I necessarily want to 8 get that specific, because I think plaintiffs -- 9 defendants, I think, have implicitly raised a concern, 11:03:46 10 which I think is not an invalid concern, that, even 11 though it might not relate to her exposure, the jury 12 might conclude it has something to do about whether 13 their warnings duty changed over time. 14 So I think if we clarify, this doesn't have to 11:04:01 15 do with her claims of exposure, it's not -- it's not 16 the talc that's used, that would be the appropriate 17 limiting instruction. And you can argue however you 18 want to argue. 19 MR. SATTERLEY: Just so there's no surprises, 11:04:16 20 when they cross-examine on Chinese talc, it opens the 21 door to all the positive tests and all the documents, 22 testing showing there's asbestos in Chinese talc. 23 THE COURT: All right. Whatever door is 24 opened, you can cross through it, and we'll get to that 11:04:31 25 place. So, with that advisory, why don't you all see</p>	<p style="text-align: right;">Page 100</p> <p>1 documents, so we'll be done in less than a half-hour, 2 Your Honor. 3 THE COURT: No more delaying issues. 4 Let's finish that direct. I don't know, in 11:05:51 5 terms of the Chinese issue, is that likely to be 6 something we need to raise before the next break, 7 whoever's doing the -- 8 MR. ASHBY: No. I could -- 9 THE COURT: So you could consider this -- 11:06:01 10 MR. ASHBY: I could save it to the very end. 11 THE COURT: Why don't we do that so we don't 12 have to keep the jury waiting. All right? 13 All right. With that, are we ready to get 14 going? 15 MR. MAIMON: Yes, Your Honor. 16 THE COURT: Let's go. 17 (Whereupon, the jury having entered the 18 courtroom, the following proceedings were held:) 19 THE COURT: Ready to proceed? 11:08:10 20 MR. MAIMON: Thank you, Your Honor. 21 BY MR. MAIMON: 22 Q. So, Dr. Longo, I just wanted to talk about the 23 historical samples of Johnson's Baby Powder that were 24 sent to you that had been produced out of the 11:08:25 25 historical samples of Johnson & Johnson, and let's just</p>
<p style="text-align: right;">Page 99</p> <p>1 if you can craft a little bit more narrow statement 2 that I can give to the jury which basically says the 3 points that I had mentioned. 4 MR. RICHMAN: I think so, Your Honor. I think, 11:04:49 5 obviously, as I indicated, we just need to take time to 6 review their proposed stipulation and look at that in 7 the context with the previous testimony. 8 THE COURT: Let me ask, how much longer does 9 plaintiff counsel's direct going to take? 11:05:02 10 MR. DEJARDIN: While he's looking at that, 11 Your Honor, this impacts the 2010 FDA study. 12 THE COURT: Let's do one thing at a time, 13 because you're not -- it's not coming through with this 14 witness, is it? I'm happy to think about that, but 11:05:15 15 right now I want to get Dr. Longo dealt with. 16 Does it relate to Dr. Longo? 17 I understand we had that issue back then, but 18 he's not having testimony about that study, does he? 19 MR. DEJARDIN: I don't think he's going to have 11:05:26 20 anything to say about it. 21 THE COURT: All right. So I'm happy to give 22 some time for you to raise that argument and consider 23 it. But right now let's deal with getting Longo on and 24 off the stand. 11:05:41 25 MR. MAIMON: I've been able to separate my</p>	<p style="text-align: right;">Page 101</p> <p>1 break this down a bit. 2 You say the Korean talc -- 3 A. Yes. 4 Q. Just remind us how many samples you looked at 11:08:37 5 and how many were positive. 6 A. For the Korean talcs, we received seven 7 historical samples and out of the seven, six were 8 positive for regulated asbestos. 9 Q. And out of -- out of the historical samples 11:08:54 10 produced by Johnson & Johnson from their facilities, 11 how many samples of Johnson's Baby Powder made with 12 Vermont talc did you analyze? 13 A. We analyzed 41 samples for this report. 14 Q. And does that include Mr. Poye's -- the samples 11:09:18 15 that Mr. Poye looked at? 16 A. Yes. 17 Q. And how many of those were positive? 18 A. About 61 percent. 19 Q. So how many out of 41? 11:09:31 20 A. Oh, there was 25 positives. 21 Q. Now, the -- does the fact that you didn't find 22 asbestos, didn't detect asbestos in some of these, does 23 that indicate there's no asbestos there? 24 A. No. Any analytical technique can only go to 11:09:54 25 your analytical sensitivity, so you can't say there's</p>

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<p>1 no asbestos there. You can't make any decision on it 2 other than -- (reporter clarification). I didn't find 3 any asbestos to our analytical sensitivity which would 4 be the finding of one fiber or bundle. 11:10:15 5 Q. Now, with regard to that, you told us that you 6 found different concentrations of asbestos in the 7 various bottles that were positive; correct? 8 A. Yes. 9 Q. And could you -- with the Court's permission, 11:10:28 10 if you could go up to the easel and graph that out for 11 us or give us a rough estimation of how that worked and 12 what impact that tells you about what -- what your 13 opinion is about those nondetects? 14 A. Yes. I had a chart because memory is not my 11:10:44 15 best aspect at times. 16 I think I gave it to you. 17 Q. I might have left it back at the office. 18 A. Ah. Well, maybe after a break. Because I 19 don't want to put something up then. 11:11:03 20 Q. Okay. So just, could you tell us, based on 21 your -- the concentrations that you found and the range 22 of concentrations, do you have an opinion with 23 reasonable scientific certainty as to whether or not 24 some of the bottles that were nondetects have some 11:11:19 25 amount of asbestos in them?</p>	<p>1 A. Yes. I took all the positive samples and 2 charted concentration on container and drew where the 3 concentrations go from our analytical sensitivity from 4 lowest to highest. 11:12:50 5 Q. And is the data in your report about the 6 concentrations on all these bottles that you're 7 referring to? 8 A. Yes. 9 MR. MAIMON: May he proceed, Your Honor? 11:13:00 10 MR. ASHBY: It's still the same objection, 11 Your Honor. 12 Can we have a sidebar? 13 THE COURT: I need to see counsel in chambers. 14 (Whereupon, the Court and counsel, having 15 convened in the Court's chambers out of the presence of 16 the jury, the following proceedings were held:) 17 THE COURT: All right. So the Kennemur, I 18 presume the objection is the opinion wasn't stated? 19 MR. ASHBY: Right. The opinion that the 11:14:10 20 nondetects that he found can still have asbestos in 21 them for whatever reasons he's about to say is nothing 22 that was disclosed in the deposition, and I asked him 23 if he had stated all his opinions at the deposition, 24 and that certainly wasn't one of them. 11:14:23 25 MR. MAIMON: So I think he testified explicitly</p>
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<p>1 A. Yes. After doing this for two years, I think 2 it's only the reason we don't detect asbestos in the 3 ones that are nondetects is we haven't quite solved how 4 to get to lower analytical sensitivities. Because -- I 11:11:41 5 can draw just a rough graph of what it looks like? 6 Q. Sure. 7 MR. MAIMON: With the Court's permission? 8 MR. DEJARDIN: Objection. Lacks foundation. 9 Move to strike the answer. 11:11:50 10 MR. ASHBY: Join. Speculation. 11 THE COURT: I'm going to reserve ruling until I 12 hear what the foundation is as to what his description 13 is. So I'll defer a ruling. 14 You may go up to the chart and show that. 11:12:07 15 THE WITNESS: So if you look at -- we have a 16 range of concentrations on the Vermont that go to our 17 analytical sensitivity, one fiber up to approximately 18 250,000 fibers or so per gram. 19 And if you chart all the concentrations, it 11:12:27 20 gives you a -- 21 MR. ASHBY: Your Honor, we're going to make a 22 Kennemur objection as well. 23 BY MR. MAIMON: 24 Q. Is what you're putting here in the data in your 11:12:37 25 report, Dr. Longo?</p>	<p>1 at his deposition that the nondetects does not mean 2 that it's free of asbestos. All it means is that it is 3 below the level of detection for the analytical 4 methodology that's being used. He testified about 11:14:38 5 that. 6 THE COURT: But that's not the opinion we're 7 talking about. The opinion he's talking about is that 8 it, in fact, would have contained asbestos I presume -- 9 MR. ASHBY: He said he thinks it does. 11:14:47 10 THE COURT: I presume he's going to do a chart 11 and say, you can follow a line down and say that there 12 might be -- that there's asbestos accordingly. 13 MR. MAIMON: He's going to say that they're -- 14 that you can't tell on that level of detection, but, 15 given the slope, some might -- will have some. 16 THE COURT: That's the opinion that I think the 17 question is, was that disclosed. 18 MR. SATTERLEY: It's their burden to 19 demonstrate, I believe, that they've closed it out and 11:15:10 20 they didn't ask the question, and if he -- counsel can 21 demonstrate that, I think -- I obviously believe that 22 Dr. Longo gave opinions about nondetect, and if they 23 asked a specific question that closed it out other 24 than, is there any other opinions, we want to see 11:15:30 25 those, because it's their burden on a Kennemur</p>

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<p>1 objection to demonstrate to the Court that they've 2 properly done that. 3 MR. ASHBY: All right. So I deposed him for 4 two days and then there was a third additional day. 11:15:41 5 But at the end of the second day, which was the final 6 day of the opinions having to do with this type of 7 issue, I had closed him out. 8 It's on November 27th, page 462. I can read it 9 if the Court would like or I can get the transcript for 11:15:59 10 everyone. 11 But I did the typical closeout question: 12 "Let me ask you this because this will -- for 13 the opinions that you're going to give in the Teresa 14 Leavitt case -- we've been doing this for two days 11:16:09 15 now -- are there any opinions that you can think of off 16 the top of your head that we have not covered that are 17 not in any of these reports that we have marked and 18 attached to the record?" 19 And he says: "None that I can think of." 11:16:21 20 MR. SATTERLEY: And all this information is in 21 the report. All the data is in the report, all the -- 22 THE COURT: Does the report state the opinion, 23 though? That's the question. Not the data. The 24 opinion that the nondetects would contain asbestos. 11:16:32 25 That's the issue here.</p>	<p>1 MR. DEJARDIN: And that's also the basis for 2 the speculation and the foundation objections going -- 3 where he's got to go with this. And as plaintiff's 4 counsel said, he's going to say that there might be 11:17:49 5 asbestos. There is no foundation for that. 6 THE COURT: We're not even there yet because -- 7 if I were to permit this, theoretically he's going to 8 try to lay some foundation, but what I'm hearing, and 9 in the absence of something that shows the other, is 11:18:01 10 that this opinion that, in fact, below the detection 11 limit there would have been asbestos was not disclosed 12 in his report or in his depo, and there was a closeout 13 question. That's what I'm hearing. That's the 14 representation I've got. 11:18:13 15 Unless there's something to the contrary, I'm 16 not going to permit this testimony. 17 MR. SATTERLEY: Well, Your Honor, we'll have 18 to -- I'll have to get the deposition. 19 Do you -- 11:18:19 20 MR. MAIMON: I have the deposition, Your Honor. 21 I'll have to take a look. But I'll -- 22 THE COURT: You need to move on. If you want 23 to come back -- come back to me, I'm happy to look at 24 it, but right now, what I've got in front of me, I'm 11:18:32 25 not permitting it.</p>
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<p>1 MR. MAIMON: I don't think so. Explicitly. 2 But the data is there. 3 THE COURT: That's not the question. He's able 4 to -- I'll permit him to testify to the data. He 11:16:43 5 also -- I will permit him to testify that a nondetect 6 doesn't mean there's nothing there. The question is, 7 is he allow -- did he disclose an opinion that, in 8 fact, there would have been asbestos there based on 9 charting -- 11:16:53 10 MR. SATTERLEY: I'm sure he did, because -- and 11 specifically with regard to chrysotile, because this 12 doesn't -- the heavy liquid separation doesn't 13 separate -- it can't pull this chrysotile up. So he 14 would have given the opinion that, even in nondetects, 11:17:06 15 there's asbestos there. I can -- we can take our time 16 to search for that. But he would have specifically 17 talked about asbestos being present even under his 18 testing methodology because it doesn't -- the 19 chrysotile is still present. 11:17:19 20 MR. ASHBY: I agree he has said that you can't 21 rule it out because -- as you pointed out, because you 22 can't know what's below the detection limit. He has 23 never said, though, that, "I still think and now it's 24 my new belief that there is asbestos in there." 11:17:38 25 MR. MAIMON: I don't think it's a new belief.</p>	<p>1 MR. MAIMON: Okay. I mean, I am going to have 2 him wrap it out and explain the types of asbestos that 3 would not have been detected by the -- by the method. 4 MR. SATTERLEY: The detection limit. 11:18:41 5 THE COURT: Right. Well, I think that's -- I 6 don't think that's the issue here. 7 MR. MAIMON: And his review of the -- 8 THE COURT: The only question that I'm ruling 9 on right now is I'm not going to let him offer an 11:18:51 10 opinion that below the detection limit there 11 nevertheless would have been asbestos based on whatever 12 extrapolation he wants to offer. Because that was not 13 disclosed. 14 MR. MAIMON: Understood. 15 And I'll check. 16 MR. ASHBY: Do we need to move to strike -- 17 THE COURT: Let me look at the language. I 18 will strike -- if he actually expressed the opinion, 19 I'll strike it. I don't remember if he did or not. 11:19:16 20 MR. SATTERLEY: I would request Your Honor 21 reserve because I think it's unfair to -- because I 22 think the deposition -- that it was covered by that. 23 THE COURT: I'll strike -- I will give enough 24 wiggle room that I'm striking -- I will say, based on 11:19:33 25 the conversations I had with counsel, I'm striking this</p>

28 (Pages 106 to 109)

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<p>1 testimony at this time subject to an offer of proof.</p> <p>2 MR. SATTERLEY: But I don't think he gave the</p> <p>3 opinions. I think he was about to.</p> <p>4 THE COURT: I'm going to go look. If he hasn't</p> <p>11:19:47 5 given the opinion, I'm not striking it. I'll look.</p> <p>6 MR. ASHBY: Look for the part where he says "I</p> <p>7 think."</p> <p>8 THE COURT: I'll look at what he says.</p> <p>9 (Whereupon, in chambers having concluded, the</p> <p>10 following proceedings were held in open court in the</p> <p>11 presence of the jury:)</p> <p>12 THE COURT: You may proceed, but you're not</p> <p>13 going to do this graph at this time.</p> <p>14 So go forward.</p> <p>11:22:05 15 BY MR. MAIMON:</p> <p>16 Q. So, Dr. Longo, could you explain to the members</p> <p>17 of the jury the level of detection that your</p> <p>18 methodology had?</p> <p>19 A. Right now, we've improved it to approximately</p> <p>11:22:19 20 4,000 asbestos fibers or bundles per gram of talc.</p> <p>21 Q. And is the method that you use, are there types</p> <p>22 of asbestos that this method, the heavy liquid</p> <p>23 separation method, will not -- are not -- is not good</p> <p>24 at detecting?</p> <p>11:22:35 25 A. Yes.</p>	<p>1 MR. ASHBY: Objection. Foundation again.</p> <p>2 THE COURT: Overruled.</p> <p>3 THE WITNESS: Yes.</p> <p>4 BY MR. MAIMON:</p> <p>11:23:39 5 Q. And is the same thing true with regard to</p> <p>6 Imerys documents that you've reviewed?</p> <p>7 A. Yes.</p> <p>8 Q. And to the extent that chrysotile was present,</p> <p>9 would the heavy liquid separation have caused it to be</p> <p>11:23:49 10 in the section that you analyzed?</p> <p>11 A. No. It will be up with the talc.</p> <p>12 Q. And with regard to anthophyllite, did you find</p> <p>13 anthophyllite in the samples that you analyzed?</p> <p>14 A. We did.</p> <p>11:23:58 15 Q. Was it a specific type of anthophyllite that</p> <p>16 allowed you to detect it by this method?</p> <p>17 A. It was the heavy density anthophyllite versus</p> <p>18 the lighter density anthophyllite.</p> <p>19 Q. To the extent that there was -- and what</p> <p>11:24:11 20 element or what -- what contributes to the density of</p> <p>21 that anthophyllite that sinks to the bottom?</p> <p>22 A. The ones that have iron -- atoms replace the</p> <p>23 magnesium atoms. Anthophyllite is a solid solution</p> <p>24 series, so you can have anthophyllite with no iron.</p> <p>11:24:33 25 And that has a density of 2.85. We very rarely see</p>
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<p>1 Q. Could you explain that to the members of the</p> <p>2 jury?</p> <p>3 A. Chrysotile asbestos, of all the samples we've</p> <p>4 analyzed, we have not found chrysotile asbestos,</p> <p>11:22:44 5 because the heavy liquid density is 2.85 and the</p> <p>6 density of chrysotile is pretty close to talc, about</p> <p>7 2.6. So if there's any present, it's not going to be</p> <p>8 detected.</p> <p>9 Q. On our animation, what would have happened if</p> <p>11:23:02 10 there were any chrysotile present?</p> <p>11 A. It would have gone up with the talc.</p> <p>12 Q. And have you seen references to chrysotile</p> <p>13 asbestos in the internal documents of Johnson & Johnson</p> <p>14 and Imerys?</p> <p>11:23:11 15 A. I have.</p> <p>16 MR. ASHBY: Objection, Your Honor.</p> <p>17 MR. DEJARDIN: Compound.</p> <p>18 MR. ASHBY: Again, Kennemur as well.</p> <p>19 THE COURT: Let's first break it up. Let's</p> <p>11:23:22 20 take it one by one.</p> <p>21 BY MR. MAIMON:</p> <p>22 Q. Have you seen documents from Johnson & Johnson</p> <p>23 that were referenced in your reference materials that</p> <p>24 talk about chrysotile in the talc?</p> <p>11:23:31 25 A. Yes.</p>	<p>1 anthophyllite without any iron in the heavy liquid</p> <p>2 density. Occasionally -- I think we saw one once.</p> <p>3 Everything we see has iron in it, and that iron</p> <p>4 increases the density from about 2.5 all the way up to</p> <p>11:24:52 5 3.2, sort of a sliding scale. It all depends when they</p> <p>6 were formed billions and billions of years ago did you</p> <p>7 have any iron or in -- in the composite of whatever the</p> <p>8 molten rock was. So, yes, we do find anthophyllite,</p> <p>9 but we don't find all of it.</p> <p>11:25:11 10 Q. And with regard to anthophyllite, if there's</p> <p>11 anthophyllite without iron present, would your method</p> <p>12 detect it?</p> <p>13 A. Typically no.</p> <p>14 Q. Now, in addition -- now, you mentioned</p> <p>11:25:38 15 winchite-richterite, and I'm going to hand up what I've</p> <p>16 marked as E-0514.169, E-609, E-610, E-611, E-0514.172,</p> <p>17 and E-0615.</p> <p>18 MR. MAIMON: May I, Your Honor?</p> <p>19 THE COURT: Yes. (Whereupon, Plaintiff's</p> <p>20 Exhibit E0514.169 was marked for identification.)</p> <p>21 (Whereupon, Plaintiff's Exhibit E0609 was</p> <p>22 marked for identification.)</p> <p>23 (Whereupon, Plaintiff's Exhibit E0610 was</p> <p>24 marked for identification.)</p> <p>25 (Whereupon, Plaintiff's Exhibit E0611 was</p>

29 (Pages 110 to 113)

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11:26:19	1 marked for identification.) 2 (Whereupon, Plaintiff's Exhibit E0514.172 was 3 marked for identification.) 4 (Whereupon, Plaintiff's Exhibit E0615 was 5 marked for identification.) 6 BY MR. MAIMON: 7 Q. And do you recognize those as pictures of a 8 bottle of Johnson & Johnson Baby Powder dated 1994 that 9 you analyzed and found to contain tremolite and 10 richterite? 11 THE COURT: First of all, can you identify 12 which exhibit you're referring to? 13 MR. MAIMON: Sure. 14 BY MR. MAIMON: 15 Q. So first of all, E-0514.169, is that a picture 16 of a bottle of Johnson's Baby Powder that you analyzed? 17 A. It is. 18 Q. And E-0609, is that another picture of the same 19 bottle? 20 A. It is. 21 Q. And E-0610, that a picture of the back of the 22 bottle? 23 A. It is. 24 Q. And E-0611, is that a close-up on the copyright 25 date for Johnson & Johnson Consumer Products	11:27:54	1 received into evidence.) 2 (Whereupon, Plaintiff's Exhibit E0514.169 was 3 received into evidence.) 4 (Whereupon, Plaintiff's Exhibit E0514.172 was 5 received into evidence.) 6 BY MR. MAIMON: 7 Q. The final -- let's just put it this way: 8 E-0514.172, what type of asbestos structure that? 9 A. That's a tremolite asbestos structure. 10 Q. And E-0615, what type of asbestos structure is 11 that? 12 A. That's richterite, which is another type of a 13 tremolite asbestos structure. 14 Q. Now, when you analyzed the asbestos structures 15 that you found in these samples, did you measure what's 16 called the "aspect ratio"? 17 A. Yes. 18 Q. And did you compare the aspect ratio of the 19 asbestos that you found with any standards with regard 20 to whether or not they met the standards for asbestos? 21 A. I did. 22 Q. Okay. And with the Court's permission, I have 23 a blow-up that I've shared with counsel about the 24 aspect ratios. 25 THE COURT: Counsel, let's make sure --
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11:27:18	1 Incorporated, of 1994 for the bottle? 2 A. It is. 3 Q. Did you analyze this bottle? 4 A. We did. 5 Q. And E-0514.172, is that an electron micrograph 6 of an asbestos structure that you identified in that 7 bottle? 8 A. It is. 9 Q. And E-0615, is that another electron micrograph 10 of another asbestos structure that you identified in 11 that bottle? 12 A. It is. 13 MR. MAIMON: Your Honor, we would offer these 14 into evidence. 15 THE COURT: Any objection? 16 MR. ASHBY: No objection. 17 THE COURT: I hear no objection. 18 They are all admitted. 19 (Whereupon, Plaintiff's Exhibit E609 was 20 received into evidence.) 21 (Whereupon, Plaintiff's Exhibit E0610 was 22 received into evidence.) 23 (Whereupon, Plaintiff's Exhibit E0611 was 24 received into evidence.) 25 (Whereupon, Plaintiff's Exhibit E0615 was	11:29:21	1 Do you have an objection? 2 MR. ASHBY: I might when I see it. 3 MR. MAIMON: If I can get it down, Your Honor, 4 and show counsel. 5 THE COURT: Yes. Down there in the corner. 6 MR. MAIMON: Demonstrative, Your Honor? 7 THE COURT: Objection? 8 MR. DEJARDIN: I didn't see it, but that's 9 fine. That's fine. 10 THE COURT: Okay. 11 BY MR. MAIMON: 12 Q. Dr. Longo, did you prepare this chart as a 13 demonstrative? 14 A. I did. 15 Q. And if I can put it up there and have the 16 doctor explain? 17 THE COURT: It would make it easier. Yes. 18 BY MR. MAIMON: 19 Q. Let me go back here. 20 THE WITNESS: Your Honor, may I stand up? 21 THE COURT: You may stand up. 22 BY MR. MAIMON: 23 Q. If you could use this and explain for us -- 24 A. Sometimes they say no. 25 Q. -- what the significance of it is with regard

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<p>1 to your findings of asbestos in Johnson's Baby Powder?</p> <p>2 A. So what we wanted to do is look at the aspect</p> <p>3 ratio, length to width, of what we detected for</p> <p>4 tremolite asbestos in a number of samples. Then we</p> <p>11:30:42 5 wanted to compare it to the National Institutes of</p> <p>6 Standard and Technology for the 1876, I believe it is,</p> <p>7 standard of tremolite asbestos that every asbestos lab</p> <p>8 in the country has to have where they say on there,</p> <p>9 this is tremolite asbestos. We measured 200 of those</p> <p>11:31:01 10 asbestos fibers and bundles and got that aspect ratio.</p> <p>11 So if we look at the blue, this is the tremolite</p> <p>12 asbestos for the National Institutes of Standard and</p> <p>13 Technology that asbestos labs have to calibrate what</p> <p>14 they do against that standard. And that's the blue.</p> <p>11:31:20 15 So you can see that the average aspect ratio</p> <p>16 comes down to approximately 9 to 1. Some longer, some</p> <p>17 shorter.</p> <p>18 Then the red is the MAS, the J&J amphibole</p> <p>19 asbestos, 304 separate asbestos structures, some</p> <p>11:31:40 20 less -- some less than 5 to 1, some -- for everything</p> <p>21 we found.</p> <p>22 And you can see that our standard for what's in</p> <p>23 the 300 some -- and 4 asbestos structures are the same</p> <p>24 for the National Institutes of Standard. It's in the</p> <p>11:31:59 25 same peak for this 9 to 10 to 1 aspect ratio.</p>	<p>1 BY MR. MAIMON:</p> <p>2 Q. Doctor -- Dr. Longo, you're familiar with the</p> <p>3 1991 publication by Professor Alice Blount</p> <p>4 titled "Amphibole Content of Cosmetic and</p> <p>11:33:58 5 Pharmaceutical Talcs"; correct?</p> <p>6 A. Yes, sir. It's referenced in my reports. We</p> <p>7 used her method for polarized light microscopy</p> <p>8 analysis.</p> <p>9 Q. And I have a copy for the Court that is marked</p> <p>11:34:11 10 Plaintiff's Exhibit L-0307, and the jury has seen this</p> <p>11 part during Dr. Blount's testimony.</p> <p>12 May I publish, Your Honor, page 229, the chart?</p> <p>13 THE COURT: Hold on one second.</p> <p>14 What's the page number?</p> <p>11:34:39 15 MR. MAIMON: 229 in the upper right-hand</p> <p>16 corner.</p> <p>17 THE COURT: Any objection?</p> <p>18 MR. ASHBY: Object to the hearsay, Your Honor.</p> <p>19 THE COURT: Objection is overruled.</p> <p>11:34:59 20 As an expert, I will permit this as a</p> <p>21 foundation for his testimony.</p> <p>22 You may show it.</p> <p>23 MR. MAIMON: Thank you, Your Honor.</p> <p>24 BY MR. MAIMON:</p> <p>11:35:04 25 Q. You are familiar with this chart in</p>
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<p>1 Let's see what other folks have said. Blount</p> <p>2 PLM, who said in her paper --</p> <p>3 MR. ASHBY: Your Honor, hearsay. Objection.</p> <p>4 THE COURT: It's overruled for purposes of</p> <p>11:32:15 5 expert testimony and the opinion stated.</p> <p>6 THE WITNESS: Thank you, Your Honor.</p> <p>7 She measured tremolite asbestos in one</p> <p>8 particular sample that was from Vermont and plotted her</p> <p>9 aspect ratio. And that would be the black.</p> <p>11:32:32 10 So we have got red, ours; National Institutes</p> <p>11 of Standard, blue; the Blount, black; and then one more</p> <p>12 from a geological paper that measured tremolite</p> <p>13 asbestos again that had been milled, which is important</p> <p>14 about aspect ratio, and compared it to asbestos and</p> <p>11:32:55 15 said this is asbestos, this is in the aspect ratio, and</p> <p>16 that's the Campbell work. And that's the green. They</p> <p>17 all line up. We have the same peak aspect ratio for</p> <p>18 what a published paper says is tremolite asbestos, what</p> <p>19 a paper written for the US Geological Research, what</p> <p>11:33:19 20 the National Institutes of Standard and Technology say,</p> <p>21 and they all match what we found in Johnson & Johnson's</p> <p>22 Baby Powder for this type of analysis.</p> <p>23 You have to -- in my opinion, I concluded it,</p> <p>24 that what we found was all regulated asbestos and is</p> <p>11:33:42 25 matching very well with independent research.</p>	<p>1 Dr. Blount's article; correct?</p> <p>2 A. Yes.</p> <p>3 Q. And the jury -- the jury has seen the</p> <p>4 article -- or has seen Dr. Blount's testimony, but she</p> <p>11:35:21 5 compared her Talc I to tremolite asbestos, and how does</p> <p>6 this chart compare and what -- how does it play into</p> <p>7 what you told the jury in your -- in your graph?</p> <p>8 A. Well, if you look, the dotted lined over there</p> <p>9 is the green line here. This is the Campbell data.</p> <p>11:35:43 10 The black line is the Blount. And the red line is the</p> <p>11 MAS. We actually have a higher peak ratio and a little</p> <p>12 bit larger aspect ratio when it's all plotted out than</p> <p>13 theirs. It matches. It's -- it matches what other</p> <p>14 researchers and Ph.D. geologists -- two Ph.D.</p> <p>11:36:05 15 geologists and the National Institutes of Standard and</p> <p>16 Technology says this is the aspect ratio for tremolite</p> <p>17 asbestos as compared to the other one.</p> <p>18 Q. And, with regard to this, again, did the</p> <p>19 asbestos that you testified to this jury about finding</p> <p>11:36:21 20 in Johnson & Johnson Baby Powder and confirming in</p> <p>21 Mr. Poye's samples of Shower to Shower, were they</p> <p>22 cleavage fragments?</p> <p>23 MR. ASHBY: Leading. Objection.</p> <p>24 THE COURT: Overruled.</p> <p>11:36:31 25 THE WITNESS: No. We don't -- I don't count</p>

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11:36:48	<p>1 cleavage fragments in TEM. I looked at Lee Poye's data 2 to verify. He did not count cleavage fragments. We 3 counted regulated asbestos fibers that fit on this 4 chart, and what we do we're a little bit more -- for 5 the protocols, it's only 5 to 1 or greater. So we're 6 not even reporting for the concentrations everything 7 less than 5 to 1, even though these publications say, 8 that's asbestos. 9 BY MR. MAIMON: 10 Q. And I'm going to hand you an article I just 11 want to make sure. 12 Are you familiar with this article? 13 A. Yes, sir, I am. 14 Q. And is this an article in a peer-reviewed 15 publication? 16 A. Yes, sir, it is. 17 Q. And is this an article that you -- is a 18 reliable authority with regard to the distinction 19 between cleavage fragments and asbestiform fibers? 20 A. Yes, sir. 21 Q. And is this something that experts in your 22 field reasonably rely upon in forming opinions about 23 the distinction between asbestiform fibers and cleavage 24 fragments? 25 A. Yes.</p>	11:39:16	<p>1 Are you familiar with the methods used 2 historically to test Johnson & Johnson talc? 3 A. I am. 4 Q. And are you familiar with the CTFA J4-1 Method? 5 A. I am. 6 Q. In your opinion, Dr. Longo, is the J4-1 Method 7 a reliable test method to determine that a talc product 8 contains no asbestos? 9 A. No, it is not. 10 Q. And why not? 11 A. The primary reason is, one, the analytical 12 sensitivity is very poor for x-ray diffraction for 13 these types of samples in talc. 14 Your state-of-the-art instrument today and if 15 you get the -- have a really, really, really good prep 16 person, meaning if you have talc plates and you have to 17 put it under -- to make a pellet, you have to typically 18 put it under anywhere from 20 to 30,000 psi to press a 19 pellet. Talc plates tend to want to slip in different 20 directions, and if you get these different directions 21 going and you don't have it right, it even reduces the 22 analytical sensitivity further. 23 For tremolite, your best state of the art and a 24 very good prep person you can probably get .1 percent, 25 but really the detection limit is typically 2 to 3.3,</p>
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11:37:53	<p>1 Q. Thank you. 2 THE COURT: Counsel, do you want to... 3 MR. SATTERLEY: Identify the -- 4 THE COURT: Identify the document. 5 MR. MAIMON: I appreciate it. 6 BY MR. MAIMON: 7 Q. If you read the title of the article, the 8 publication, the date, and the offers. 9 A. The title of the title is "Analytical 10 Transmission Electron Microscopy of Amosite Fibers from 11 South Africa." 12 BY MR. MAIMON: 13 Q. Amosite what? 14 A. "Amosite Asbestos from South Africa." 15 Thank you. 16 The authors are Mark Germane and John F. 17 Puffer. It is published in archives in the 18 Environmental and Occupational Health. This is a -- 19 just looking for the date of publication. 20 Q. Look in the lower left-hand corner of the first 21 page of the article. 22 A. I was getting there. It's 2019. This is 23 literally new research in a new publication. 24 Q. Now, I'd like to move on to our second subject, 25 which was Johnson & Johnson testing.</p>	11:40:45	<p>1 maybe as high as .4 percent. 2 Anthophyllite is much higher. 3 And chrysotile you very rarely ever see in talc 4 because of the similarity in chemical structure -- the 5 chemical elements even though the structures are 6 different. 7 The second thing is, it cannot tell you if it's 8 fibrous or not. It just tells you it's present. It is 9 not a method that should be used ever for cosmetic talc 10 if you really want to understand if it's present or 11 not. 12 Q. Are you familiar with the TM7024 method, the 13 Johnson & Johnson specification method for transmission 14 electron microscopy analysis of talc for asbestos? 15 A. I am familiar with it. 16 Q. And do you have an opinion with reasonable 17 scientific certainty as to whether that is a reliable 18 testing method for the detection of asbestos? 19 A. Well, the tool is a very reliable testing 20 method. They're using an analytical transmission 21 electron microscope. It's what we use. 22 The preparation, sample preparation, is the 23 problem, in how much of the -- in how many grid squares 24 they're going to analyze is the problem. Analyzing 25 it -- preparing the sample according to their protocol</p>

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<p>1 and analyzing it according to their protocol -- no 2 heavy liquid density, 10 grid openings -- their 3 analytical sensitivity is approximately to find one 4 fiber, their analytical sensitivity is approximately 11:42:11 5 12 million fibers per gram. So there has to be at 6 least 12 million in there for you to find one. 7 Our analytical sensitivity is -- right now, and 8 we keep working to try to get it lower and lower -- is 9 4,000 fibers per gram. 12 -- of all the samples we've 11:42:35 10 analyzed, an analytical sensitivity at 12 million 11 fibers per gram, all our samples we would only have had 12 one positive. Everything else, all those other many 13 positives, would have been negative. 14 I think it would a good screening tool for the 11:42:52 15 Korean talc, because we did get two positives there, 16 but for Italian and Vermont, no, you should not use 17 that method at all in my opinion. 18 Q. And with regard -- 19 A. For TEM. But I mean XRD. 11:43:08 20 Q. And with regard to the method discussing how 21 many fibers you have to find in order to have a 22 quantifiable number, how does that play into the 23 reliability of the method? 24 A. So it makes it very hard to have what's called 11:43:24 25 a "positive sample."</p>	<p>1 fiber. 2 Then they have another rule. In order for it 3 to be called quantifiable, if it's tremolite, you have 4 to have 5. You can have 4 and they'll say it's 11:45:18 5 nonquantifiable. 6 And then you have to have -- and that's 7 56,800,000 asbestos fibers per gram. Now, if you were 8 to have 4 tremolite and 4 anthophyllite, they still 9 call that unquantifiable. They'll say you have to have 11:45:33 10 at least 5 of each type. So you would have to have 5 11 tremolite and 5 anthophyllite before they would call it 12 positive. 13 If you take -- these, now you would have to -- 14 you could have 113,600,000 asbestos fibers before those 11:45:50 15 tests would call it positive. And, you know, if you go 16 to the worst-case scenario, you get 4 of each. 17 You'd have a quarter of a billion asbestos 18 fibers per gram and it would still be called 19 nonquantifiable because you didn't get 5 of any one. 11:46:08 20 That, to me, is not acceptable for this type of 21 work. 22 Q. And this is the Johnson & Johnson method, 23 TM7024, for testing talc for asbestos? 24 A. Yes. 11:46:22 25 Q. This is not the method that you use?</p>
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<p>1 Q. Did you prepare a chart to help explain this? 2 A. Yes. 3 MR. MAIMON: Your Honor, I've shown -- I've 4 shown that -- sent it to counsel for the defense and, 11:43:38 5 with the Court's permission, I'd like to have Dr. Longo 6 explain this. 7 BY MR. MAIMON: 8 Q. Did you prepare this chart to help explain this 9 issue, Dr. Longo? 11:43:51 10 A. That's my chart blown up. 11 MR. MAIMON: Request permission to publish, 12 Your Honor. 13 MR. ASHBY: No objection. 14 THE COURT: All right. You may. 11:44:04 15 BY MR. MAIMON: 16 Q. And this one... 17 And if you could stand up and help explain your 18 opinions about the method based on this chart. 19 A. So if we backtrack just a tad, when we analyze 11:44:35 20 these samples, from time to time we will find one 21 asbestos fiber in our analysis. We report it and let 22 others -- I believe that's a significant and that's -- 23 because of what we're finding. 24 In that method, to find one, you have to have 11:44:56 25 14,200,000 fibers to statistically define that one</p>	<p>1 A. No. I would not use this method. 2 And this doesn't include -- you got to use 3 heavy liquid density and you have to report what you 4 find, at least if you're going to make an argument, 11:46:38 5 well, it doesn't really mean anything. In order for 6 other scientists to take a look and see what you found, 7 you have to report it and get the data that's missing 8 in a lot of these things. 9 Q. And have you seen records from Johnson & 11:46:52 10 Johnson, McCrone and Cyprus, which shows that asbestos 11 was present but reported it as nonquantifiable? 12 MR. ASHBY: Foundation. Objection. 13 THE COURT: Lay a foundation. 14 Once he answers the question, it's subject to 11:47:10 15 foundation. I'll reserve. 16 MR. MAIMON: Sure. 17 BY MR. MAIMON: 18 Q. Did you discuss with the attorney for Johnson & 19 Johnson at your deposition actual pictures of asbestos 11:47:17 20 found by Cyprus where McCrone had issued a report that 21 said no quantifiable asbestos? 22 A. I did. 23 Q. And, based on those reports, how reliable is 24 any -- based on that evidence, how reliable, in your 11:47:31 25 opinion, Dr. Longo is any report that says no</p>

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<p>1 quantifiable amounts of asbestos are found?</p> <p>2 A. It's not reliable at all. You don't -- you</p> <p>3 can't go back and say, well, it's not quantifiable and</p> <p>4 there's nothing there with no data because</p> <p>11:47:45 5 nonquantifiable, each one of these numbers would be</p> <p>6 called nonquantifiable. 200 million, nonquantifiable.</p> <p>7 So you can't rely on that data. If they had provided</p> <p>8 the data, the count sheets, then we could make a</p> <p>9 decision if it was really quantifiable or not and what</p> <p>11:48:06 10 the concentrations were.</p> <p>11 Q. So if you simply have a summary document that</p> <p>12 asserts that asbestos was nondetected or is</p> <p>13 nonquantifiable without the backup, is that a reliable</p> <p>14 way to say there's no asbestos present?</p> <p>11:48:21 15 A. No.</p> <p>16 Q. I'd like to move on to Terry Leavitt, and I'm</p> <p>17 going to ask you the materials -- what are the</p> <p>18 materials that you reviewed concerning Ms. Leavitt?</p> <p>19 A. I reviewed her two volumes of deposition. I</p> <p>11:48:42 20 reviewed her mother's deposition. I reviewed the --</p> <p>21 all her -- I reviewed her -- her interrogatories -- I</p> <p>22 think it was interrogatories and looked at the housing</p> <p>23 and covered everything that I felt was necessary in</p> <p>24 order to render any opinions about what her potential</p> <p>11:49:07 25 exposure was to Johnson & Johnson and how much of her</p>	<p>1 conservative number so I'm not overestimating or not</p> <p>2 trying to say, give as much as I can.</p> <p>3 Q. Did you -- we had Dr. Abraham testify about his</p> <p>4 digestion.</p> <p>11:50:35 5 Did you review the stubs that were prepared of</p> <p>6 the digestion by Dr. Abraham?</p> <p>7 A. Yes. I received those and we put it into our</p> <p>8 new field emissions scanning electron microscope and</p> <p>9 evaluated them.</p> <p>11:50:51 10 Q. And we'll talk about that in a minute. But --</p> <p>11 so we can -- I'm going to...</p> <p>12 MR. MAIMON: May I approach, Your Honor?</p> <p>13 THE COURT: You may.</p> <p>14 MR. MAIMON: I'm going to hand up to you what</p> <p>11:51:30 15 I've marked E-0520.14, .16, .22, .25, .32 and Exhibits</p> <p>16 E-0620, E-0621, E-0622, and E-0623.</p> <p>17 (Whereupon, Plaintiff's Exhibit E-0520.14 was</p> <p>18 marked for identification.)</p> <p>19 (Whereupon, Plaintiff's Exhibit E-0520.16 was</p> <p>20 marked for identification.)</p> <p>21 (Whereupon, Plaintiff's Exhibit E-0520.22 was</p> <p>22 marked for identification.)</p> <p>23 (Whereupon, Plaintiff's Exhibit E-0520.25 was</p> <p>24 marked for identification.)</p> <p>25 (Whereupon, Plaintiff's Exhibit E-0520.32 was</p>
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<p>1 exposure to Johnson & Johnson, based on the testimony</p> <p>2 of her and her mother.</p> <p>3 Q. Did you make that assessment from an industrial</p> <p>4 hygiene perspective drawing on your years of experience</p> <p>11:49:19 5 in doing asbestos assessments?</p> <p>6 A. I based it on that. I based it on our own</p> <p>7 studies of application and exposures. I based it on</p> <p>8 Johnson & Johnson's own studies where they measured how</p> <p>9 much talcum powder got on a person during different</p> <p>11:49:36 10 activities, from powdering a baby to getting out of the</p> <p>11 shower, and what the different aspects of different</p> <p>12 people and how much they use. I considered it all.</p> <p>13 And then I tried to make it very conservative on what</p> <p>14 her actual use and how much talcum powder she was</p> <p>11:49:53 15 exposed to.</p> <p>16 Q. Why, in your estimation, did you choose a</p> <p>17 conservative number?</p> <p>18 A. I think it's always better to choose a</p> <p>19 conservative number so you're not saying the worst case</p> <p>11:50:04 20 or the most.</p> <p>21 For example, if somebody says, well, I would</p> <p>22 change a baby's diaper 12 times a day, you know,</p> <p>23 infant. But we all know that -- we've had children --</p> <p>24 after two years, two and a half years, that starts</p> <p>11:50:20 25 tapering off. Thank god. So I will pick a very</p>	<p>1 marked for identification.)</p> <p>2 (Whereupon, Plaintiff's Exhibit E-0620 was</p> <p>3 marked for identification.)</p> <p>4 (Whereupon, Plaintiff's Exhibit E-0621 was</p> <p>5 marked for identification.)</p> <p>6 (Whereupon, Plaintiff's Exhibit E-0622 was</p> <p>7 marked for identification.)</p> <p>8 (Whereupon, Plaintiff's Exhibit E-0623 was</p> <p>9 marked for identification.)</p> <p>11:51:47 10 BY MR. MAIMON:</p> <p>11 Q. And I'll ask you, can you identify those as</p> <p>12 photographs and EDS spectra, where applicable, of the</p> <p>13 fibers that your laboratory located from Ms. Leavitt's</p> <p>14 tissue off of Dr. Abraham's stubs?</p> <p>11:52:05 15 A. This is all out of our report. These are our</p> <p>16 scanning electron micrograph. These are our EDS</p> <p>17 spectra. This is our labeling. This is ours.</p> <p>18 MR. MAIMON: Your Honor, we would offer those</p> <p>19 into evidence.</p> <p>11:52:20 20 MR. ASHBY: Object on foundation, Your Honor.</p> <p>21 THE COURT: Could I have some foundation of</p> <p>22 what he actually did?</p> <p>23 MR. MAIMON: Sure.</p> <p>24 BY MR. MAIMON:</p> <p>11:52:40 25 Q. The stubs from Dr. -- first of all, did you</p>

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11:52:56	1 also review Dr. Abraham's report concerning his digestion? 2 3 A. Yes. So we did review his report. We received a number of his samples. 4 5 Q. And those would have been the digested tissue on what's called a "stub," an SEM stub; right? 6 7 A. An SEM stub. We received those samples on October 22, 2018. We analyzed four of the six samples. These would have been Samples JA18-101-AL, small A. 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	11:55:51	1 Ms. Leavitt's tissue? 2 Page 16 of 42? 3 A. Yes, it is. 4 MR. MAIMON: Your Honor, we would offer this into evidence. 5 6 MR. ASHBY: Foundation, Your Honor. 7 THE COURT: Admit that also. 8 (Whereupon, Plaintiff's Exhibit E-0520.16 was received into evidence.) 9 10 MR. MAIMON: Thank you. 11 May I publish? 12 THE COURT: You may. 13 BY MR. MAIMON: 14 Q. And you have two pictures here. 15 16 17 18 19 20 21 22 23 24 25
11:53:19	10 Same numbers, ALB, BLA, and BLB. 11 We put it into the scanning electron microscope. I actually was there supervising and looking at it, and we went through and analyzed areas for minerals to determine what was on the SEM stub. 12 13 14 15 16 17 18 19 20 21 22 23 24 25	11:55:57	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
11:53:42	15 Q. And are these the actual photographs of the structures that you identified in Ms. Leavitt's tissue? 16 17 A. Yes. If you go through our report, we have the same structures that have been pointed out here, in the same EDS patterns. 18 19 20 21 22 23 24 25	11:56:00	15 16 17 18 19 20 21 22 23 24 25
11:54:04	20 Q. So, for instance, 0520.14, is that an asbestos structure that you identified in Ms. Leavitt's tissue? 21 22 A. Yes. That is page 14 of 42, and that would match our 14 of 42. 23 24 25	11:56:18	20 21 22 23 24 25
11:54:23	24 MR. MAIMON: Your Honor, I offer this into evidence. 25	11:56:36	24 25
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11:54:36	1 THE COURT: You mean this particular Table 520.14? 2 3 MR. MAIMON: Yes. 4 THE COURT: Admit. 5 (Whereupon, Plaintiff's Exhibit E-0520.14 was received into evidence.) 6 7 MR. MAIMON: Thank you. 8 BY MR. MAIMON: 9 Q. Can you tell the members of the jury what you identified in Ms. Leavitt's tissue in this exhibit? 10 11 A. I was on the page. 12 That's a scanning electron micrograph. That is, in our opinion, was chrysotile. Magnesium. We have it going from bottom right-hand side up to the top. That fiber is approximately 60 to 65 micrometers long. And approximately -- that bundle, and approximately a half a micron wide. So that's a 60 to 1, at least a 60 to 1 aspect ratio. 13 14 15 16 17 18 19 20 21 22 23 24 25	11:56:59	1 material. 2 Q. Thank you. 3 The next exhibit, 0520.22, is that a tremolite structure that you found in Ms. Leavitt's tissue? 4 5 Page 22 of 42. 6 A. Page 22 of 42. I've got all mine mixed up, so it just easier to go right in my report. 7 8 Q. Sure. 9 A. Yes, sir, it is. 10 MR. MAIMON: Offer it into evidence, 11 Your Honor? 12 MR. ASHBY: Foundation. 13 THE COURT: Overruled. 14 It's admitted. 15 (Whereupon, Plaintiff's Exhibit E-0520.22 was received into evidence.) 16 17 BY MR. MAIMON: 18 Q. .25. Page 25 of 42. Is that another tremolite structure that you found in Ms. Leavitt's tissue? 19 20 21 22 23 24 25
11:55:02	15 top. That fiber is approximately 60 to 65 micrometers long. And approximately -- that bundle, and approximately a half a micron wide. So that's a 60 to 1, at least a 60 to 1 aspect ratio. 16 17 18 19 20 21 22 23 24 25	11:57:15	10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
11:55:21	20 of the Johnson & Johnson Baby Powder samples? 21 A. No. 22 Q. And is that because of the heavy liquid separation effect that you told the jury about? 23 24 A. Yes, it is. 25	11:57:34	20 21 22 23 24 25
11:55:39	25 Q. Is .16 a talc fiber that you found in	11:57:45	25

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11:57:53	<p>1 (Whereupon, Plaintiff's Exhibit E-0520.25 was 2 received into evidence.) 3 BY MR. MAIMON: 4 Q. 0520.32, is that another tremolite image -- 5 structure that you found in Ms. Leavitt's tissue? 6 A. And the page number of that? 7 Q. 32. 8 MR. MAIMON: Offer it into evidence, 9 Your Honor? 10 MR. ASHBY: Same objection. 11 THE COURT: Same ruling. 12 Admitted. 13 (Whereupon, Plaintiff's Exhibit E-0520.32 was 14 received into evidence.) 15 MR. MAIMON: May I publish? 16 THE COURT: You may. 17 BY MR. MAIMON: 18 Q. Again, we have two pictures here. And can you 19 tell us what that is and what's the distinction between 20 the two pictures that we have? 21 A. Again, the upper -- upper one is what it will 22 typically look like when we do x-ray mapping. One of 23 the things that this automated -- this field emission 24 SEM will do is you can automate it. So we can set it 25 up to scan the sample on its own, and it is taking</p>	12:00:17	<p>1 up? 2 A. Yes. I just took the size of the average 3 fiber, calculated the volume of a cylinder, and then 4 filled it in. And that's about what it came to. 5 Q. Now, one of the photographs we saw was of a 6 talc fiber. 7 Do you recall that? 8 A. Yes, sir. 9 Q. And under the SEM, can you distinguish between 10 a talc fiber and an anthophyllite fiber? 11 A. You cannot. 12 Q. And could you take those stubs and put them in 13 one of your TEM microscopes? 14 A. We've never figured out how to do that. 15 I mean, the answer is no, you can't. Once it 16 gets on to a carbon stub, what you would have to do is 17 destroy the sample and see if you could get it back 18 into a solution and refilter it onto a TEM grid. But 19 there would be no way to say, that's the one I saw. 20 Now, you can do the opposite. You can take a 21 TEM grid and put it into the SEM and look at it, that 22 particular area, and then go back into the TEM. But 23 you can't do the reverse. 24 Q. And then, just briefly, Exhibits 0620, 0621, 25 0622, and 0623, are those structures that you found in</p>
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11:58:50	<p>1 3 million x-ray counts per minute. It's a very 2 sensitive new quad. And I can get into the whole nerd 3 stuff, but it'd bore you. So we can set it up to scan 4 it, and then you can go back and you say, tell us where 5 all -- anything you found with silicon and calcium. 6 Calcium is the primary indicator for tremolite. And 7 this is -- this is one of the most unusual bundles of 8 tremolite I've ever seen. When I say "bundle," because 9 it's -- you can almost see the barrel of it. 10 Now, if you were just measuring that by TEM, 11 you would say, hmm, pretty close to only 5 to 1. But 12 looking at that, it meets every definition of 13 asbestiform bundle. You can see the fibers. You can 14 see the fibers that are -- that could be peeled off. 15 You can see at the top it's got the little splayed ends 16 people like to talk about right up there? 17 Higher, higher. There we go. 18 And that particular bundle, I would estimate, 19 has somewhere in the order of a hundred to two 20 hundred -- I mean, a thousand to two thousand 21 individual bundles in it. And I've not seen one quite 22 like that where it's short but very wide. It has all 23 those individual tremolite fibers in it. 24 Q. So this bundle would have a thousand to 25 two thousand individual tremolite fibers that make it</p>	12:01:36	<p>1 Ms. Leavitt's tissue from Dr. Abraham's stubs? 2 A. Yes. 3 MR. DEJARDIN: Objection. Cumulative as to 21. 4 I think that's the same picture of another one he's 5 talked about. 6 MR. MAIMON: No problem. 7 MR. SATTERLEY: We won't introduce the same 8 picture twice, Your Honor. 9 THE COURT: 21. We're not referring to that? 10 BY MR. MAIMON: 11 Q. So 20 -- 62 -- 0620, 0622, and 0623 are all 12 those structures that you found in Ms. Leavitt's 13 tissue? 14 A. Yes. These were all done in my lab. 15 MR. MAIMON: We offer them into evidence, 16 Your Honor. 17 MR. ASHBY: Foundation, Your Honor. 18 THE COURT: Same ruling. 19 20, 22, 23 are admitted. 20 (Whereupon, Plaintiff's Exhibit E-0620 was 21 received into evidence.) 22 (Whereupon, Plaintiff's Exhibit E-0622 was 23 received into evidence.) 24 (Whereupon, Plaintiff's Exhibit E-0623 was 25 received into evidence.)</p>

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<p>1 BY MR. MAIMON:</p> <p>2 Q. Now, can you tell the members of the jury based</p> <p>3 on your review of the materials, Dr. Longo, of the</p> <p>4 estimates that you made for the amount of baby powder</p> <p>12:02:13 5 that Ms. Leavitt used or was used on her over her</p> <p>6 lifetime?</p> <p>7 A. Yes, sir.</p> <p>8 Q. Please do.</p> <p>9 A. Reading her mother's deposition, which you've</p> <p>12:02:25 10 talked about, the early years, infant until about six</p> <p>11 or seven, on what was -- what was the hygiene activity</p> <p>12 with Johnson's Baby Powder. And then -- on</p> <p>13 Mrs. Leavitt. And I went through and said --</p> <p>14 Let me just get it so it will make it easier.</p> <p>12:02:47 15 If we start off with the '66 to '68, the diapering.</p> <p>16 And that's while she was still in -- still in the</p> <p>17 Philippines.</p> <p>18 So her mother said that typically she would</p> <p>19 change diapers in the beginning 12 times. That's</p> <p>12:03:08 20 because of the heat there. She would routinely. When</p> <p>21 she changed the diaper --</p> <p>22 MR. ASHBY: Your Honor, I'm just going to have</p> <p>23 to object. I think we need a sidebar on this.</p> <p>24 THE WITNESS: Oh, I'm sorry.</p> <p>12:03:19 25 MR. MAIMON: This is the basis of his opinion,</p>	<p>1 THE COURT: Ready whenever are.</p> <p>2 MR. RICHMAN: Thank you.</p> <p>3 So there's -- Judge, there's two issues we</p> <p>4 anticipate we wanted to take up outside the presence of</p> <p>12:06:02 5 the jury.</p> <p>6 Your Honor, what we anticipate happening with</p> <p>7 Dr. Longo is somewhat similar, which we think was</p> <p>8 started to be previewed with Dr. Egilman, was the</p> <p>9 experts are now giving this sort of blunderbuss opinion</p> <p>12:06:15 10 that I have read the testimony of Susan Leavitt, and</p> <p>11 Sue, just to give the Court a little context, Susan</p> <p>12 Leavitt is the only fact witness who testifies about</p> <p>13 the diapering aspect for any of the -- the baby, I</p> <p>14 guess the '66 to '68 testimony.</p> <p>12:06:33 15 So there's two issues, Your Honor.</p> <p>16 One, there's obviously a hearsay objection, and</p> <p>17 while there are -- there are different levels of</p> <p>18 hearsay. There is some hearsay that experts can rely</p> <p>19 on. It's a little different when an expert is trying</p> <p>12:06:45 20 to backdoor the specific statements of a fact witness</p> <p>21 who has not been called to testify.</p> <p>22 And citing, Your Honor, first of all,</p> <p>23 People v. Sanchez talks about this recently in the</p> <p>24 63 Cal.4th 665, and it dealt with the same issue of an</p> <p>12:07:04 25 expert just regurgitating fact witness testimony. And</p>
<p>1 Your Honor.</p> <p>2 THE COURT: Is there an objection about --</p> <p>3 about the hearsay aspect of the deposition?</p> <p>4 MR. ASHBY: It's foundation for what he's</p> <p>12:03:30 5 saying.</p> <p>6 MR. MAIMON: Let me -- let me try and rephrase,</p> <p>7 Your Honor, if I could.</p> <p>8 MR. ASHBY: I don't think it'll be -- it can be</p> <p>9 cured, though, is the point.</p> <p>12:03:39 10 A brief sidebar might help.</p> <p>11 THE COURT: All right. A sidebar.</p> <p>12 MR. MAIMON: Your Honor, perhaps this is a good</p> <p>13 time for a break for the jury.</p> <p>14 THE COURT: Take a break here. Might as well.</p> <p>12:04:04 15 And we'll come back and do the last.</p> <p>16 (Whereupon, the jury having exited the</p> <p>17 courtroom, the following proceedings were held:)</p> <p>18 THE COURT: Dr. Longo, if you want to step out.</p> <p>19 Appreciate that.</p> <p>12:05:00 20 THE WITNESS: I'm on my way out.</p> <p>21 THE COURT: Good. Thank you.</p> <p>22 Mr. Ashby?</p> <p>23 MR. RICHMAN: I'll be addressing this issue,</p> <p>24 Your Honor.</p> <p>12:05:21 25 Just trying to get my stuff.</p>	<p>1 what they say is, and I quote. This is 686: "What an</p> <p>2 expert cannot do is relate as true case-specific facts</p> <p>3 asserted in hearsay statements unless they are</p> <p>4 independently proven by competent evidence or are</p> <p>12:07:20 5 covered by a hearsay exception."</p> <p>6 THE COURT: Let me stop you there for one</p> <p>7 second.</p> <p>8 Is Ms. Leavitt's testimony being admitted in</p> <p>9 this case?</p> <p>12:07:26 10 MR. SATTERLEY: Yes, Your Honor.</p> <p>11 She would have come two weeks ago but for other</p> <p>12 witnesses that extended longer than expected. So.</p> <p>13 MR. MAIMON: We anticipated having her</p> <p>14 testimony already in place by the time Dr. Longo came,</p> <p>12:07:39 15 but schedulingwise, he's here and she hasn't come yet.</p> <p>16 So we think it's perfectly appropriate, subject to</p> <p>17 connection, for him to give testimony.</p> <p>18 MR. RICHMAN: So there's two issues,</p> <p>19 Your Honor.</p> <p>12:07:50 20 That is issue one and obviously --</p> <p>21 MR. SATTERLEY: I'm sorry. I apologize.</p> <p>22 And Sanchez, the Sanchez case he's talking</p> <p>23 about -- talking about testimony that's not going to</p> <p>24 occur. And she -- she is going to be here.</p> <p>12:08:00 25 MR. RICHMAN: So there's two issues,</p>

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<p style="text-align: right;">Page 146</p> <p>1 Your Honor. That's one. We haven't heard from her. 2 So if she does end up coming, that alleviates some of 3 the issue. 4 That does not alleviate one continuing issue 12:08:10 5 that it sounds like Dr. Egilman -- excuse me -- that 6 Dr... 7 MR. SATTERLEY: Longo. 8 MR. RICHMAN: Thank you. 9 -- Dr. Longo was beginning to give and that 12:08:16 10 Dr. Egilman was starting to tread on. 11 What appears is there is this overall testimony 12 that, from the day of birth until 1968, she was exposed 13 to Korean talc and that there is absolutely no factual 14 foundation to support that opinion. 12:08:31 15 As Mr. Brown had to point out with Dr. Egilman, 16 the testimony of Ms. Susan Leavitt -- and this is -- 17 I'm citing page 21 of her deposition. 18 "Question:" This is line 15. "Do you know 19 where the Johnson's Baby Powder that you purchased at 12:08:46 20 Sangley Point came from? 21 "Answer: It came from the United States." 22 She says on page 19, "Now, where did you 23 purchase the baby powder that you used on Terry when 24 she was a baby in the Philippines. 12:08:58 25 "Answer: When my husband was in the military</p>	<p style="text-align: right;">Page 148</p> <p>1 how long it was used. There would be -- there's no 2 evidence of that and it's total hearsay. 3 So -- and there's no way for us to unring the 4 bell with Dr. Longo when he's just going to say, oh, 12:10:24 5 that's what the testimony is, when there is no factual 6 foundation to support that, even if she does testify. 7 And that's the issue. 8 MR. SATTERLEY: Your Honor, Mr. Richman and 9 Mr. Brown have been admitted here pro hac vice. And I 12:10:39 10 would expect that they would follow the rules and the 11 law of California and be candid with the Court and not 12 make misrepresentations. 13 What Mr. Brown did yesterday, which is going to 14 come out later, is lie to the jury with Dr. Egilman. 12:10:53 15 And what Mr. Richman just did is not be candid 16 with Your Honor regarding the testimony, because on the 17 very -- a few pages later, Ms. Leavitt is directly 18 asked where they purchased the Johnson's Baby Powder, 19 and she said, at the local grocery stores where we go 12:11:12 20 shopping. 21 So, for the -- for counsel to tell Your Honor 22 that the only place that she purchased was at a local 23 PX -- 24 MR. RICHMAN: I never said that. 25 MR. SATTERLEY: Wait a second now.</p>
<p style="text-align: right;">Page 147</p> <p>1 we purchased it at the commissary or the PX." 2 And then she says: "And where was the 3 commissary or PX. 4 "Answer: It was in Sangley Point Naval 12:09:10 5 Station." 6 So the -- issue one is the undisputed testimony 7 from the witness is the products she purchased on base 8 was sourced from the United States. There is nothing 9 to dispute that in the record. 12:09:20 10 More importantly, Your Honor, the other 11 undisputed testimony is that on -- sometime in 12 September of 1967, Terry Leavitt's mother, Susan, and 13 her husband -- I believe his name was David -- moved to 14 the United States. They left behind Terry with Terry's 12:09:43 15 grandmother and a house helper. 16 So -- and they stayed there for another seven 17 months before Terry and the grandmother joined them 18 back in the United States. 19 I believe Terry's grandmother has passed and 12:09:58 20 also the housekeeper. So there will be absolutely no 21 testimony about the products that were used on Terry 22 during the time she was still in the Philippines that 23 her parents had moved to the United States. 24 So it would be utter and complete speculation 12:10:12 25 as to what was used on her, the frequency it was used,</p>	<p style="text-align: right;">Page 149</p> <p>1 MR. RICHMAN: I object. That's a 2 misrepresentation. 3 THE COURT: One at a time. 4 MR. RICHMAN: I never said that's the only 12:11:26 5 place, Your Honor. The entire time period was the 6 representation of the witness. 7 THE COURT: Let's -- plaintiff is speaking now. 8 MR. SATTERLEY: So for counsel to suggest to 9 this jury and to Your Honor that -- number one, that 12:11:36 10 the Korean talc is not at issue because she purchased 11 it at a PX and that she knew the actual source of how 12 it came to when, in fact, on page 20 of her deposition, 13 when directly asked by counsel, she said, "We purchased 14 it at the grocery store where we go shopping." 12:11:53 15 So that -- number one, that's inaccurate 16 representation. 17 MR. RICHMAN: Your Honor, I'm sorry. I would 18 just ask counsel to read the question because it does 19 clarify. 12:12:03 20 MR. SATTERLEY: "You mentioned that you -- that 21 you'd get the Johnson's Baby Powder at the 22 commissary (sic) after he was discharged from the 23 military in late March 1967. Where did you purchase 24 Johnson's Baby Powder?" 12:12:14 25 MR. RICHMAN: After late March 1967.</p>

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1 MR. SATTERLEY: Counsel.
2 THE COURT: Yeah, let's -- one at a time,
3 please.
4 MR. SATTERLEY: So my point is, Your Honor,
12:12:22 5 Ms. Leavitt's going to be here to -- Susan Leavitt's
6 going to be here to testify. She's going to testify
7 that she purchased sometime at the PX, the Post
8 Exchange, the military. Sometimes she purchased it at
9 a grocery store. She's going to testify when they did
12:12:37 10 and how they did it. All that's going to be -- she
11 testified about it in her deposition. This expert --
12 so there's no Sanchez issue at all. Sanchez related to
13 the gang activities and the underlying facts that were
14 never introduced and the testimony that was never
12:12:49 15 introduced. Here, that -- the Sanchez case doesn't
16 apply whatsoever. So she's going to testify about
17 that.
18 Everything he's raised is subject to
19 cross-examination and the weight the jury may give to
12:12:58 20 the testimony of -- of Ms. Leavitt's testimony.
21 The -- certainly we can -- Your Honor is going
22 to give an instruction that there's two ways to prove a
23 fact: direct evidence and indirect evidence.
24 And you -- I think Your Honor has already given
12:13:14 25 preliminary instructions to that.

1 addressed by Mr. Satterley, is that, as of June of '67,
2 Terry's mother and her husband moved to the
3 United States. Since I have familiarized myself with
4 the rules of California caselaw, a fact witness needs
12:14:38 5 personal knowledge of the testimony -- or of events to
6 give testimony about those. It is sheer and utter
7 speculation as to what the babysitter may have been
8 doing during the time that Terry is across the world
9 from where her parents are. There's not going to be
12:14:52 10 any evidence of -- from anyone with any personal
11 knowledge as to what happened after September of 1967.
12 The problem is, that Mr. Satterley seems to
13 keep missing, is that these expert witnesses keep
14 saying there's just this continuous use of the product
12:15:06 15 from Korea from the date of her birth through 1968.
16 And there's absolutely no factual basis to substantiate
17 that. And that is our issue.
18 THE COURT: I understand the arguments that
19 have been made here. I haven't yet heard actually what
12:15:20 20 he's going to say. And what he's going to say is
21 what -- and I will instruct the jury -- that his
22 statements about the depositions are not evidence and
23 the jury will have to decide whether, in fact, when
24 these people testify, it is. And there's an
12:15:33 25 instruction I give at the end of the case in which the

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1 And Ms. Leavitt's going to testify that her --
2 I think it was her father and other family members did
3 this activity on Terry also, and that it's her
4 understanding and belief, because she instructed them
12:13:30 5 to do so, that that -- that the powder was done when
6 she wasn't there.
7 So -- and the jury, Your Honor, may sustain
8 objections when she comes, but to totally prevent an
9 expert from giving opinions regarding this testimony
12:13:43 10 is, I think, not well founded based upon the law in
11 California.
12 And Ms. Clancy says she's putting on
13 Ms. Leavitt.
14 I don't know.
12:13:53 15 Do you have anything to add to that argument?
16 MS. CLANCY: No. I agree with Mr. Satterley.
17 MR. RICHMAN: So just in response, Your Honor,
18 I have never stated there was not a small period of
19 time that she may have claimed she bought a powder at a
12:14:06 20 grocery store. What I stated to the Court was that,
21 from the date of her birth and through March of 1967,
22 the undisputed testimony was that she bought the
23 product on base which came from the United States.
24 There's no dispute about that fact.
12:14:21 25 Moreover, which is also in dispute and was not

1 jury considers whether something has been established
2 or not with regard -- that an expert relies on.
3 So all of that's sort of a -- a later problem.
4 The arguments that you raise right now are all
12:15:48 5 appropriate matters for cross-examination. I'm not
6 going to preclude him from expressing an opinion, and
7 you can go at him going forward.
8 I haven't heard actually what he's going to
9 say, and I want to hear that. If he says something
12:16:04 10 that you think he -- that there's no basis in the
11 record to do it, I'll consider that. But what I am
12 hearing is is he's going to tell based on what he
13 understands from her deposition and he's going to draw
14 some conclusions about it. And that may or may not be
12:16:16 15 borne out by the evidence.
16 So I'm not going to issue a ruling right now
17 that precludes him from going there.
18 MR. RICHMAN: And that's fine. I just -- to
19 clarify the last point, I think -- or ask the Court to
12:16:25 20 consider, because we're going to have to probably
21 revisit this with this witness. It's not that she
22 doesn't say it in her deposition, it's that she has no
23 basis for saying it, and that now this witness cannot
24 regurgitate something that she will not be able to say
12:16:39 25 under any Rule of Evidence.

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<p>1 THE COURT: And that is -- that is why I am 2 going to instruct the jury that he's explaining what 3 the basis of his opinion is. His summary of the 4 deposition is not admissible testimony at all. The 12:16:50 5 jury is going to have to decide when that individual 6 testifies what is there and decide if that supports his 7 opinion. 8 MR. RICHMAN: Thank you, Your Honor. 9 THE COURT: Let's take a break while we can. 12:17:02 10 MR. ASHBY: I have one other issue. I hadn't 11 made a Kennemur objection. It had to do with documents 12 that Dr. Longo said he had reviewed for historical 13 testing regarding chrysotile. I had asked him at his 14 deposition about that. I had asked him to cite those 12:17:16 15 documents for me. He could not do that at the 16 deposition. He said he would withdraw his testimony if 17 he couldn't find those documents. He offered to 18 collect those documents for me and give them to me, 19 which he never did. That was the basis of my Kennemur 12:17:29 20 objection, is that I am now in a position where he's 21 testified about documents he's seen that show 22 historical testing of chrysotile, yet at his deposition 23 he was unable to disclose those documents to me, 24 offered, volunteered to collect those documents for me 12:17:46 25 to provide them but never did. Now I'm hearing it at</p>	<p>1 document to know whether or not it's relevant at all to 2 this case and the exposures in this case, because as 3 you know, there are -- there's Chinese talc, there's 4 Italian talc, there's Vermont talc, and there's Korean 12:19:27 5 talc. And for me to know whether or not these are 6 documents that are relevant to this case, that may have 7 been relevant to some other case certainly, or somebody 8 else may have asked him about it, it's only fair for me 9 to see those documents when he says to me that there 10 are documents that support this position. 11 And he cited -- he cited -- in his report he 12 cites there's 95 documents. So I asked him, of those 13 95 documents you're citing, which ones are the 14 chrysotile documents that support your opinion? And he 12:19:54 15 could not do it. He said he would collect those for 16 me, and he did not do it. 17 So I'm put in this very difficult position now. 18 It's not unlike when Dr. Hopkins was on the stand and 19 the objections constantly were, what's the document 12:20:07 20 that supports it? 21 THE COURT: Let me see the deposition testimony 22 you're referring to before you ask him. 23 MR. SATTERLEY: And the disclosure here, 24 Your Honor, where I incorporated Lanzo, Anderson, 12:20:18 25 Ingham.</p>
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<p>1 trial and I'm incapable of cross-examining him on the 2 documents. 3 MR. MAIMON: I think if you look at the 4 deposition transcript, what Dr. Longo said is I have 12:17:58 5 been deposed countless times for Johnson & Johnson, 6 I've identified the documents before in prior 7 depositions by Johnson & Johnson, and by Mr. Ashby's 8 firm, of him and that he relies on the list of 9 documents that he has produced and these documents are 12:18:17 10 on the list. And he doesn't -- I don't believe he has 11 to sit there at a deposition and identify document by 12 document if it's been produced in anticipation of his 13 deposition, if it's -- if it's there, and if he's been 14 deposed upon it, countless times and gone through the 12:18:35 15 documents with Johnson & Johnson. 16 MR. SATTERLEY: I believe the disclosure of the 17 case incorporated by reference, his prior testimony 18 from the Lanzo case and from these other cases so that 19 we have more than adequate notice and these list of 12:18:50 20 reliance lists, he's been cross-examined ad nauseam. 21 MR. ASHBY: The problem, if anyone puts 22 themselves in my shoes, is when he's tells me he's seen 23 documents regarding chrysotile in products, and as I 24 explained at the deposition and Mr. Maimon and I got 12:19:07 25 into a disagreement about is, I need to see the</p>	<p>1 THE COURT: Before you go there, I want to hear 2 first what the testimony is. 3 Mr. Ashby. 4 You know what we're going to do? Go look for 12:20:31 5 it now. I want to take a break right now. Before we 6 call the jury back in, I'll look at this issue. 7 Let's go off the record. 8 (Recess taken.) 9 (Afternoon Session) 12:55:33 10 (Whereupon, the jury having entered the 11 courtroom, the following proceedings were held:) 12 THE COURT: Before we were on the break, there 13 was an objection to Dr. Longo who was referring to some 14 testimony of plaintiff's mother, who will be a witness 12:35:52 15 in this case. 16 I'm overruling the objection at this point, but 17 I want to instruct you that the expert is permitted to 18 tell you what assumptions he's making in reaching his 19 conclusions. 12:36:02 20 You will be asked at the end of the case to 21 decide whether those assumptions are supported by the 22 actual evidence. So his statement summarizing the 23 depositions are not evidence in this case. You hear 24 the actual testimony and decide if it supports the 12:36:18 25 opinion.</p>

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<p>1 So, with that instruction, you may continue 2 with your question. 3 MR. MAIMON: Sure. 4 BY MR. MAIMON: 12:36:23 5 Q. Dr. Longo, again, let's talk about the time 6 that Ms. Leavitt lived in the Philippines, 1966 to 7 1968, and can you tell us, based on your review of the 8 materials in this matter, the conservative estimate 9 that you've come up with, with the amount of Johnson's 10 Baby Powder that was used on her? 11 A. During that two-year time frame, I made an 12 estimate of 5,110 applications. 13 Q. How much was that again? 14 A. 5,110 applications for those two years in the 12:37:02 15 Philippines. 16 Q. And how did you come to that calculation? 17 A. Her mother testified that for -- during that 18 period, she would start off saying that she would 19 change as much as 10 to 12 diaper changes a day. In 12:37:21 20 addition to the high humidity in the Philippines, she 21 would routinely -- the mother would routinely powder 22 Teresa on and off just to try to reduce -- and give a 23 bath. So. And over time, this two-year period of time 24 the diapering became less, but the bathing continued 12:37:48 25 and the powdering, especially in the summer months,</p>	<p>1 A. From the age of about two to seven, her mother 2 would continue -- when she moved back -- when she moved 3 to San Francisco in California and ultimately Fremont, 4 her mother testified that she would still help and 12:39:13 5 bathe her and put baby powder on her until she got to 6 be about seven years old. 7 At the age of 7, she started using the baby 8 powder herself. And as she got older, she not only 9 used it after showers, but she talked a lot about using 10 it as a dry shampoo, which I've seen before, and also 11 for setting foundation, putting it on the face. 12 And she did that with the dry shampoo four or 13 five times per week, starting in 7th grade at 12 years 14 of age, and so on and so forth. 12:39:48 15 So I just went through -- it's really simple 16 math. If you can -- okay. Four to five times a week, 17 then that gives you the ability to say -- you can 18 calculate the number of times the dry shampoo, 19 4.5 times a week equals 18 times a month. 18 times a 12:40:04 20 month times 12 years, which she did that, 4,300 21 applications, and so on and so forth. 22 So I just worked through all the different 23 applications and then take a conservative number. 24 Q. What was the conservative estimate that you 12:40:18 25 made for applications in the United States?</p>
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<p>1 continued. 2 So I thought -- so I believe, looking at that, 3 a conservative estimate between the diapering, the 4 powdering, and the bath would be seven times a day, 12:38:02 5 that there would have been an application of Johnson's 6 Baby Powder to Terry. 7 Q. So, even though Terry Leavitt's mother said 8 that she did diapering 10 to 12 times a day and then 9 there was bathing on top of that and then there was 10 powdering on top of that because of the humidity, the 12:38:18 11 number that you used for her estimate was how many 12 times a day? 13 A. Seven. 14 Q. Okay. And with regard to -- 12:38:29 15 A. And then it's 365 times, you know, a year 16 because this happened every day. And then the two 17 years. 18 Q. And, with regard to the time that she used 19 Johnson's Baby Powder when she lived in the 12:38:43 20 United States, which would have been sourced from 21 Vermont, did you make a calculation of the estimate of 22 the number of applications of baby powder for that 23 period of time? 24 A. Yes. 12:38:54 25 Q. Tell us what it was.</p>	<p>1 A. In the United States, the entire -- looking at 2 total applications for the United States -- just give 3 me a second because I had it broken out between... 4 I had it all together. Took me one second. 12:40:59 5 In the United States it was 11,700 6 applications. 7 Q. Now, have you taken into account estimates by 8 Johnson & Johnson with regard to -- in making these 9 calculations, estimates by Johnson & Johnson about 10 average use of baby powder products? 11 A. Yes. 12 Q. And have you taken -- have you into account 13 estimates by Johnson & Johnson of hypothetical exposure 14 levels during such applications? 12:41:42 15 A. Correct. 16 Q. Have you taken into account NIOSH fiber per cc 17 projections or estimate calculations with regard to 18 Johnson's Baby Powder? 19 A. I have. 12:41:55 20 Q. Have you done analyses yourself, based on your 21 samples, of exposure levels during the application of 22 Johnson's Baby Powder? 23 A. Yes. We have actually done hygiene studies 24 where the Johnson's Baby Powder is applied and air 12:42:14 25 samples are taken to measure what potential levels of</p>

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<p style="text-align: right;">Page 162</p> <p>1 asbestos get into the breathing zone of the person 2 doing it. 3 Q. And with regard to that, have you compared the 4 results of your studies with published literature about 12:42:28 5 exposure levels upon using cosmetic talc with asbestos? 6 A. Yes, sir. There's a peer-reviewed publication 7 doing almost the exact same thing we did. 8 Q. And, based on your calculations and your -- 9 your own studies as well as your review of the 12:42:44 10 literature, can you tell us, with reasonable scientific 11 certainty, what you believe to be the range of exposure 12 levels for an application of Johnson's Baby Powder? 13 MR. DEJARDIN: Objection. Vague. Calls for -- 14 lack of foundation. Speculation. 12:42:58 15 MR. ASHBY: Overbroad as to "application," 16 given there's multiple. 17 THE COURT: Let's define what we mean by 18 "application." 19 MR. MAIMON: Sure. 12:43:04 20 BY MR. MAIMON: 21 Q. The types of applications that you've described 22 were discussed in the depositions that you reviewed, 23 can you tell us what types of -- or what range of 24 exposure levels you would expect based on your 12:43:18 25 experience, as well as the literature that you</p>	<p style="text-align: right;">Page 164</p> <p>1 Powder? 2 A. I do. 3 MR. ASHBY: Objection. 4 MR. DEJARDIN: Objection. Foundation -- 5 THE COURT: Hold on a second. 6 MR. DEJARDIN: Foundation. Speculation, 7 Your Honor. 8 MR. ASHBY: Subject to the motion in limine. 9 And I join. 12:45:03 10 THE COURT: Overruled. 11 You may answer. 12 THE WITNESS: It's my opinion that she was. 13 BY MR. MAIMON: 14 Q. And what do you base that upon? 12:45:10 15 MR. ASHBY: Same objections. 16 MR. DEJARDIN: Join. 17 THE COURT: And what he bases it on, I'll hear 18 what he says. I'm going to overrule the objection at 19 the moment. 12:45:18 20 THE WITNESS: I'm starting out on basing it on 21 all the testing that we've done verifying certain 22 amounts of regulated asbestos in the Johnson Baby 23 Powder product. The testing that we've done for the 24 products based on -- (reporter clarification) on the 12:45:38 25 Johnson Baby Powder products that were tested.</p>
<p style="text-align: right;">Page 163</p> <p>1 reviewed, as well as the Johnson & Johnson documents 2 that you reviewed for such applications? 3 A. Yes, I can. 4 THE WITNESS: I'm sorry. I was waiting for 12:43:31 5 your objection. Just trying to be polite. I 6 apologize. 7 THE COURT: No prompting the lawyer. 8 THE WITNESS: Your Honor, I didn't want to. 9 THE COURT: You may answer. 12:43:44 10 THE WITNESS: Yes. The range of exposures, 11 sometimes lower, sometimes higher, but based on 12 everything we've looked at, in my opinion, range from 13 approximately 0.1 regulated asbestos fibers per cc to 14 1.0 regulated asbestos fibers per cc. 12:44:11 15 BY MR. MAIMON: 16 Q. Now, based on your review of the documents, 17 based upon your Johnson & Johnson and Imerys, based 18 upon your own testing of the products that you have 19 talked to us about, as well as your validation of 12:44:27 20 Mr. Poye's results, based on the digestion results of 21 your review of Dr. Abraham's stubs that you told us 22 about, as well as the exposure estimates, based on all 23 of that, do you have an opinion, with reasonable 24 scientific certainty, as to whether Terry Leavitt was 12:44:47 25 significantly exposed to asbestos from Johnson's Baby</p>	<p style="text-align: right;">Page 165</p> <p>1 BY MR. MAIMON: 2 Q. There would be -- those would be both the Asian 3 samples and the Vermont samples that you talked about. 4 A. Correct. 5 Q. Correct? 6 Is it also based upon your review of Johnson & 7 Johnson documents? 8 A. Yes, sir. 9 Q. And is it also based upon your review of 12:45:54 10 digestion showing the types of asbestos and the types 11 of fibers in Ms. Leavitt's tissue? 12 A. Yes. 13 Q. Did you find -- is it also based on your 14 familiarity with the literature on the subject? 12:46:06 15 A. Yes. 16 Q. Okay. And did you find tremolite asbestos in 17 Ms. Leavitt's tissue? 18 A. Yes. 19 Q. Is that consistent with your testing of the 12:46:14 20 Johnson & Johnson products? 21 A. It is. 22 Q. Did you find talc, talc fibers, in her tissue? 23 A. Yes. Both talc fibers and talc plates. 24 Q. And is that consistent with your testing of the 12:46:27 25 products themselves?</p>

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<p>1 A. Yes.</p> <p>2 Q. And, to the extent that that talc was</p> <p>3 anthophyllite you explained the inability of the SEM to</p> <p>4 distinguish, is that also consistent with your testing</p> <p>12:46:36 5 of the Johnson & Johnson products?</p> <p>6 A. It would be.</p> <p>7 Q. And you found chrysotile in the tissue as well;</p> <p>8 correct?</p> <p>9 A. Yes, sir.</p> <p>12:46:45 10 Q. And is that consistent with your review of the</p> <p>11 documents?</p> <p>12 A. Yes, it is.</p> <p>13 MR. ASHBY: Object. Move no strike,</p> <p>14 Your Honor, based on what we talked about.</p> <p>12:46:57 15 THE COURT: There is a motion to strike on the</p> <p>16 documents. I'm going to reserve ruling on that subject</p> <p>17 to our discussions.</p> <p>18 BY MR. MAIMON:</p> <p>19 Q. And is it also consistent with your review of</p> <p>12:47:08 20 the Cyprus or Imerys documents, Dr. Longo?</p> <p>21 A. It is.</p> <p>22 Q. Now, based upon your review of the materials in</p> <p>23 this case, is there any other documented or confirmed</p> <p>24 significant asbestos exposure that Terry Leavitt has</p> <p>12:47:23 25 had aside from her use of Johnson's Baby Powder for the</p>	<p>1 Q. Now, I have one final question for you,</p> <p>2 Dr. Longo. And first of all --</p> <p>3 Two questions.</p> <p>4 A. It's a lie.</p> <p>12:48:33 5 THE COURT: Never a trust a lawyer who says he</p> <p>6 has one final question.</p> <p>7 MR. SATTERLEY: On both sides.</p> <p>8 THE COURT: You can pick a side.</p> <p>9 BY MR. MAIMON:</p> <p>12:48:43 10 Q. Is your methodology, when you talked about with</p> <p>11 the sensitivity, is it capable of identifying</p> <p>12 14 asbestos fibers per gram of talc?</p> <p>13 A. No, sir. That's impossible, as we sit here</p> <p>14 today.</p> <p>12:48:58 15 Q. And is any methodology that you're familiar</p> <p>16 with capable of identifying asbestos in talc at the</p> <p>17 level of 14 fibers per gram?</p> <p>18 A. No. We have probably the lowest sensitivity of</p> <p>19 any of the labs that I know. We're right -- hovering</p> <p>12:49:16 20 around 2500. We're talking almost two orders of</p> <p>21 magnitude lower than that. I'm not aware of anything</p> <p>22 that can do that.</p> <p>23 Q. Of all the opinions that you've given us been</p> <p>24 to a reasonable degree of scientific certainty?</p> <p>12:49:30 25 A. Yes, sir.</p>
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<p>1 use on her?</p> <p>2 MR. DEJARDIN: Objection. Foundation. First</p> <p>3 part. Or "after the side" -- or "aside."</p> <p>4 THE COURT: Let me -- let me figure out. I'm</p> <p>12:47:40 5 going to sustain the objections. First of all, I don't</p> <p>6 know what foundation or what basis of where we're going</p> <p>7 on this.</p> <p>8 MR. MAIMON: Sure.</p> <p>9 BY MR. MAIMON:</p> <p>12:47:46 10 Q. You told us that you reviewed Ms. Leavitt's</p> <p>11 deposition?</p> <p>12 A. Yes.</p> <p>13 Q. You reviewed her mother's deposition; correct?</p> <p>14 A. Yes, sir.</p> <p>12:47:50 15 Q. You reviewed answers to interrogatories talking</p> <p>16 about where she lived and where she went to school?</p> <p>17 A. Yes, sir.</p> <p>18 Q. And based -- and did -- and based upon that,</p> <p>19 have you been able to identify, based on your review of</p> <p>12:48:01 20 the materials in this case, any other asbestos --</p> <p>21 confirmed or documented significant asbestos exposure</p> <p>22 aside from the Johnson's Baby Powder that you already</p> <p>23 told us about?</p> <p>24 A. No. I could not find any evidence of any</p> <p>12:48:16 25 outside exposure other than the Johnson's Baby Powder.</p>	<p>1 MR. MAIMON: Thank you.</p> <p>2 Those are all the questions I have, Your Honor.</p> <p>3 THE COURT: Cross-examination?</p> <p>4 MR. ASHBY: Thank you, Your Honor.</p> <p>5 Can I have a second to clear this out,</p> <p>6 Your Honor?</p> <p>7 CROSS-EXAMINATION BY MR. ASHBY:</p> <p>8 Q. Good afternoon, Dr. Longo.</p> <p>9 A. Good afternoon, sir.</p> <p>12:51:09 10 Q. I have not seen you since your deposition. I</p> <p>11 hope you've been well.</p> <p>12 A. I'm trying to.</p> <p>13 Q. You talked a little bit about industrial</p> <p>14 hygiene earlier, and I think you said you attended some</p> <p>12:51:24 15 seminars maybe on it and maybe you spoke at some of</p> <p>16 them; is that what you said?</p> <p>17 A. I've taught at industrial hygiene conferences</p> <p>18 to certified industrial hygienists. I've published in</p> <p>19 industrial hygiene journals. I have been -- I have</p> <p>12:51:39 20 been asked to give talks on our research on industrial</p> <p>21 hygiene, yes, sir.</p> <p>22 Q. What you did say, though, is you're not a</p> <p>23 certified industrial hygienist; correct?</p> <p>24 A. No, sir, I'm still not.</p> <p>12:51:50 25 Q. You've never taken the test to be a certified</p>

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12:52:00	<p>1 industrial hygienist?</p> <p>2 A. No, sir, I haven't.</p> <p>3 Q. You -- you're not a geologist, either; correct?</p> <p>4 A. No. I don't have a degree in geology.</p> <p>5 Q. You're not a mineralogist as well?</p> <p>6 A. I don't have a degree in mineralogy. We have</p> <p>7 to -- I have to do a lot of that in the arena of</p> <p>8 asbestos, but I don't have a degree in it.</p> <p>9 Q. I -- what my question was is are you a</p> <p>10 mineralogist? Is that "yes" or "no"?</p> <p>11 A. Well, it's a little difficult to answer</p> <p>12 questions like that "yes" or "no," so I would have to</p> <p>13 say "yes and no."</p> <p>14 Q. Do you have a Ph.D. in mineralogy?</p> <p>15 A. That I do not have.</p> <p>16 Q. The first time that you personally ever</p> <p>17 analyzed what you know to be a Johnson & Johnson talcum</p> <p>18 powder product was in 2017?</p> <p>19 A. January of 2017, yes, sir.</p> <p>20 Q. And you're aware, however, that the testing of</p> <p>21 cosmetic talc for the presence of asbestos has gone on</p> <p>22 for decades; right?</p> <p>23 A. Yes, sir.</p> <p>24 Q. You, on the other hand, first started testing</p> <p>25 cosmetic talc only after being contacted by law firms</p>	12:54:06	<p>1 I can't talk about the Department of Defense stuff;</p> <p>2 otherwise, I'm going to have to kill you.</p> <p>3 MR. ASHBY: I didn't catch that. What did he</p> <p>4 say?</p> <p>5 MR. SATTERLEY: Don't repeat it. Don't repeat</p> <p>6 it.</p> <p>7 THE WITNESS: Only since it's on the record.</p> <p>8 THE COURT: The Court will note everyone is</p> <p>9 laughing and we hope it was a joke.</p> <p>10 THE WITNESS: It was a joke.</p> <p>11 I think I'd get killed if I said that.</p> <p>12 BY MR. ASHBY:</p> <p>13 Q. None of that work, though, had anything to do</p> <p>14 with talcum powder; right?</p> <p>15 A. No. It wasn't talcum powder, but all this</p> <p>16 research we've done over the years helps us understand</p> <p>17 how to really analyze for microparticles and</p> <p>18 microfibers. So we're not just a -- we're just not a</p> <p>19 testing lab. We have all these scientists that we can</p> <p>20 make progress on this. So we use things that we have</p> <p>21 used for talcum powder. But, no. No government agency</p> <p>22 has come to us and said, please test this talcum</p> <p>23 powder.</p> <p>24 Q. Dr. Longo, you've done this a few times. You</p> <p>25 know how this works. We're going to try and get you</p>
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12:53:10	<p>1 for the plaintiffs in asbestos litigation; right?</p> <p>2 A. That is true.</p> <p>3 Q. You never -- you've never tested cosmetic talc</p> <p>4 when you weren't being paid to do it by lawyers for the</p> <p>5 plaintiffs?</p> <p>6 A. That is true.</p> <p>7 Q. The only time you've tested talcum powder is</p> <p>8 for plaintiffs lawyers suing for money in litigation;</p> <p>9 right?</p> <p>10 A. I guess eventually that's what happens, yes,</p> <p>11 sir.</p> <p>12 Q. You mentioned some work for some government</p> <p>13 agencies. I think you talked -- did you talk about --</p> <p>14 did you mention NASA today?</p> <p>15 A. I did not.</p> <p>16 Q. No, you did not. Okay.</p> <p>17 A. Did you want me to?</p> <p>18 Q. No. You don't have to. You usually say that</p> <p>19 you can't talk about it; right?</p> <p>20 MR. MAIMON: Objection, Your Honor.</p> <p>21 "Can't talk about."</p> <p>22 THE WITNESS: No, I talk about NASA. That's</p> <p>23 the work we did on their space x-ray telescope where we</p> <p>24 were doing microsurgery, actually drilling holes to</p> <p>25 help connect chips because of -- et cetera, et cetera.</p>	12:55:04	<p>1 out of here as fast as you can.</p> <p>2 I would appreciate it if you answer my</p> <p>3 questions.</p> <p>4 MR. ASHBY: I'll ask the Court to either</p> <p>5 admonish the witness or move to strike the testimony to</p> <p>6 the extent it was more than a "yes" or "no."</p> <p>7 THE COURT: I'm not going to strike that</p> <p>8 answer, but I will -- let's try to keep your answers</p> <p>9 succinct, sir.</p> <p>10 THE WITNESS: Sorry, Your Honor.</p> <p>11 THE COURT: Go ahead.</p> <p>12 BY MR. ASHBY:</p> <p>13 Q. You never published any papers relating to</p> <p>14 talc; true?</p> <p>15 A. That's true.</p> <p>16 Q. None of the work you've talked about with the</p> <p>17 jury in this case has ever been submitted for peer</p> <p>18 review; true?</p> <p>19 A. That is correct.</p> <p>20 Q. You're being compensated for your time here</p> <p>21 today; true?</p> <p>22 A. That is correct.</p> <p>23 Q. And you've told me at your deposition in</p> <p>24 November that you've only ever talked about your data</p> <p>25 with respect to cosmetic talc when MAS has been</p>

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12:55:54	<p>1 compensated for it; right?</p> <p>2 A. We've only ever talked about it?</p> <p>3 Q. You've only ever talked about it when MAS is</p> <p>4 being compensated for it.</p> <p>5 A. I've only testified at trial when -- when -- so</p> <p>6 my company can send a bill, yes, sir.</p> <p>7 Q. And you're the president of your lab, and it's</p> <p>8 called MAS; right?</p> <p>9 A. Yes, sir.</p> <p>10 Q. You own 75 percent of MAS; true?</p> <p>11 A. That is correct.</p> <p>12 Q. You opened MAS in February of 1988?</p> <p>13 A. Opened the doors, yes, sir.</p> <p>14 Q. And you had some discussions with Mr. Maimon</p> <p>15 about the \$30 million number.</p> <p>16 Do you recall that?</p> <p>17 A. I do.</p> <p>18 Q. And you said you hadn't -- that wasn't personal</p> <p>19 to you, you didn't make that 30 million personally is</p> <p>20 what you said; right?</p> <p>21 A. That is correct.</p> <p>22 Q. But what you've testified to in the past is</p> <p>23 that over the past 30 years MAS has billed over</p> <p>24 30 million for legal consultation, depositions, work</p> <p>25 evaluation, and trial testimony on behalf of</p>	12:58:23	<p>1 BY MR. ASHBY:</p> <p>2 Q. That's you on the right there; right?</p> <p>3 A. How did you guess?</p> <p>4 Q. George Yamate on the left there?</p> <p>5 A. Yes, sir.</p> <p>6 Q. You told us -- or you told me at your</p> <p>7 deposition in the past one of the ways you've explained</p> <p>8 this is that there was a price competition in the TEM</p> <p>9 community and you wanted to show that you had the best</p> <p>10 TEM lab at the time; is that right?</p> <p>11 A. That's correct.</p> <p>12 Q. But what you didn't do for showing that you're</p> <p>13 the best TEM lab in the country is you didn't -- you</p> <p>14 were not wearing a lab coat there; right?</p> <p>15 A. No. That would be a suit.</p> <p>16 Q. Are you wearing a lab coat?</p> <p>17 That's not a lab coat.</p> <p>18 A. That's not a lab coat.</p> <p>19 Q. Are you in a lab?</p> <p>20 A. No, sir, I'm not.</p> <p>21 Q. You're in a courtroom; right?</p> <p>22 A. Yes.</p> <p>23 Q. Another way you've explained it in the past is</p> <p>24 that you were trying to get the message across that MAS</p> <p>25 was a great lab for clearance samples and if there was</p>
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12:57:00	<p>1 plaintiffs. Right?</p> <p>2 A. That is correct.</p> <p>3 Q. Not long after opening the doors at MAS, you</p> <p>4 were running an ad in which you were soliciting</p> <p>5 business; correct? Are you familiar with this ad?</p> <p>6 A. I've been shown it many times in the last</p> <p>7 30 years.</p> <p>8 Q. It's in the National Asbestos Council; right?</p> <p>9 In that magazine?</p> <p>10 A. Yes, sir. 1989. It's a classic.</p> <p>11 MR. ASHBY: May I approach, Your Honor?</p> <p>12 THE COURT: You may.</p> <p>13 BY MR. ASHBY:</p> <p>14 Q. I've handed you DX12204.</p> <p>15 Do you recognize that document?</p> <p>16 A. I do.</p> <p>17 Q. And is this the ad that you had published in</p> <p>18 the trade magazine for the National Asbestos Council?</p> <p>19 A. Yes, sir, it is.</p> <p>20 Q. All right.</p> <p>21 MR. ASHBY: Your Honor, can I publish?</p> <p>22 MR. MAIMON: No objection.</p> <p>23 THE COURT: You may publish.</p> <p>24 (Whereupon, Defendant's Exhibit DX12204 was</p> <p>25 marked for identification.)</p>	12:59:18	<p>1 ever a dispute, you'd be willing to stand up and defend</p> <p>2 your data in court; right? That's the other way you</p> <p>3 explained it; is that true?</p> <p>4 A. I think both those explanations go together.</p> <p>5 Q. I'm not suggesting they're not. I'm just</p> <p>6 asking if those are the two explanations.</p> <p>7 MR. MAIMON: Objection.</p> <p>8 BY MR. ASHBY:</p> <p>9 Q. So let me back up. The other way for -- or</p> <p>10 maybe the similar way you've explained this is that you</p> <p>11 were trying to get the message across that MAS was a</p> <p>12 great lab for clearance samples and if there was ever a</p> <p>13 dispute you'd be willing to stand up and defend your</p> <p>14 data in court; right?</p> <p>15 A. That's all part of the same reason why we did</p> <p>16 that.</p> <p>17 Q. Okay. But you've never actually testified in</p> <p>18 court to defend your clearance data; right?</p> <p>19 A. I have not. That's because we're so good.</p> <p>20 Q. Before you got heavy into consulting in</p> <p>21 cosmetic talc litigation, about 35 to 40 percent of</p> <p>22 MAS's business came from consulting?</p> <p>23 A. Yes, sir.</p> <p>24 Q. But in the past year, it has increased to about</p> <p>25 70 percent of your business; right?</p>

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13:00:41	1 A. That is correct. 2 Q. And that jump from 40 to 70 percent is due 3 exclusively to the more work you have in talc 4 litigation; right? 5 A. That is correct. 6 Q. You've testified as an expert in asbestos 7 litigation since the 1980s; right? 8 A. I think the first case was 1989 or 1990. 9 Q. Since you ran that ad that we still have up, 10 30 years ago you've given about 2500 to 3,000 11 depositions; true? 12 A. Since about 1989, 1990, when it started in 13 about 1991 and '92, that's true. 14 Q. On average, now, you have testified at least 15 once a week, every week for the last five years? 16 A. Yes. That is correct. 17 Q. Even more recently, you're having one to two 18 depositions per week; right? 19 A. Yes, sir. 20 Q. And 95 percent of the time that you're in 21 court, it's for plaintiffs attorneys in asbestos 22 litigation; true? 23 A. That is true. 24 Q. In fact, you've been designated as an expert 25 several thousand times by plaintiffs lawyers suing in	13:03:21	1 and they did something called "exfoliation" to it. 2 Can you explain what "exfoliation" is? 3 A. Sure. Vermiculite comes in plates, sort of 4 stacked up, thin mineral plates and has some water in 5 there. And if you take it through a furnace at about 6 1250 degrees Fahrenheit and rotate it through, it'll 7 expand that water and make it pop like popcorn so it's 8 exfoliated. 9 That gives it its insulation capabilities 10 because it lets air get into the structure between the 11 leaves. So you can go from what looks like a pound of 12 the rock and exfoliate that and it would be this big 13 (indicating). 14 Q. And Scotts, because it had vermiculite in it, 15 their product had some trace asbestos contamination; 16 right? 17 A. That's correct. 18 Q. And they hired you to defend them in court to 19 say that the trace contamination in their product was 20 extremely low and couldn't cause harm to a consumer; 21 right? 22 A. Yes and no. I never say any -- that any of 23 this causes harm to anybody. I'm just a measurement 24 guy. 25 And, yes, based on the application of that
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13:01:58	1 litigation? 2 A. With 3500 depositions, that math works. 3 Q. You said recently that you think every 4 plaintiff's attorney in the country lists you in any 5 type of asbestos litigation? 6 A. Sadly, that's true. They don't even call me. 7 They just list my name. 8 Q. Okay. I'm going to -- you switched subjects 9 now. You talked a little bit about -- or you talked 10 with Mr. Maimon a little bit about the concentration 11 method and TEM, so we can talk about microscopes. You 12 can put that aside, the ads. 13 Would you agree with me that in the 1970s, TEM 14 analysis was expensive, the TEM microscope itself? 15 A. In 1970 dollars, I would agree. 16 Q. And you've stated there were very few, if any, 17 TEMs in commercial laboratories that had the 18 appropriate technology to perform accurate trace 19 amphibole contaminant analysis; right? 20 A. That's correct. 21 Q. You've actually -- some of the work you've done 22 when you have worked for defendants you did some work 23 for a company called Scotts; right? 24 A. Yes, sir. 25 Q. And Scotts was a company that took vermiculite,	13:04:35	1 fertilizer, encapsulated, spread with a spreader in the 2 trace amounts, I don't -- it was my opinion that there 3 was no significant exposure, which is different than 4 taking a powder that's loose and pouring it on your 5 body every day. So there's -- you can't -- it's apples 6 and oranges, those two types of scenarios. 7 Q. So if you -- I gave you some binders there. 8 You took a look at them earlier when you first got in. 9 A. Which one do you want me to get? 10 Q. It's Volume II. 11 MR. ASHBY: Can you see if Mr. Maimon has a 12 copy? 13 THE WITNESS: I don't see volumes. 14 MR. MAIMON: How about the tab number? 15 MR. ASHBY: Why don't I take a look? 16 THE WITNESS: This one's much fatter than 17 yours. 18 MR. ASHBY: We're starting skinny. 19 THE WITNESS: There's more down here. Oh, 202. 20 BY MR. ASHBY: 21 Q. Right. There you go. 22 So if you could turn to just that first tab. 23 It says "April 10, 2015 report"? 24 Is that the report that you prepared for the 25 Scotts Company?

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13:06:01	1 THE COURT: Are you looking at the exhibit book	1	Q. However, in the 1970s, there were no ATEM bulk
	2 or the transcript book?	2	sample vermiculite/amphibole accepted and validated
	3 MR. ASHBY: It's called -- it says "Longo Cross	3	protocols for this type of analysis."
	4 Outline Exhibits, Volume II."	4	Do you see that?
	5 THE COURT: Okay. Which tab again?	5	A. I do.
	6 MR. ASHBY: The first one.	6	Q. And then -- then you say, "Another problem in
	7 THE COURT: All right. That's easy.	7	the 1970s was that there were very few, if any, ATEMs
	8 THE WITNESS: Yes, sir. This is one of them.	8	in commercial laboratories that had the appropriate
	9 BY MR. ASHBY:	9	technology to perform accurate trace amphibole
	10 Q. Right. This is one of the -- this is a report	10	contaminant analysis."
	11 that you issued to the Court in some case that Scotts	11	That's what you said when you were working on
	12 was in?	12	behalf of Scotts; right?
	13 A. I believe so.	13	A. Yes, sir. I still stand by that statement.
	14 Q. If you could turn to the -- page 6. Actually,	14	Q. I'm not suggesting you don't.
	15 turn -- it's going to be marked -- it says "005" at the	15	So you -- you talked a little bit about -- you
	16 bottom.	16	can take that down now, John.
	17 Do you see that?	17	And you're familiar with the J4-1 Method. You
	18 A. I have 005.	18	talked about that a little bit, too; right?
	19 MR. ASHBY: So it says DX11219.0005 for	19	A. Yes.
	20 everybody following along.	20	Q. And you know that if you reviewed the J4-1
	21 Your Honor, can I publish his report?	21	Method that the J4-1 Method on its face says one of the
	22 THE COURT: Any objection?	22	reasons that TEM wasn't being used for J4-1 was that
	23 MR. MAIMON: No objection.	23	there was -- it had to do with the expense of the
	24 THE COURT: All right. You may publish.	24	equipment eliminated -- eliminated it as a routine
	25 (Whereupon, Defendant's Exhibit DX11219 was	25	method; right?
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13:07:25	1 marked for identification.)	1	A. That's what it states.
	2 MR. ASHBY: John, can you pull up page -- on my	2	Q. It's one of the reasons. There were a couple,
	3 copy, 0005.	3	but that's one of the reasons.
	4 BY MR. ASHBY:	4	A. That's what it states.
	5 Q. So it says -- you start -- you wrote this;	5	Q. And you know that J4-1 was the industry
	6 right?	6	standard in the United States in the 1970s, right, for
	7 A. Yes, sir.	7	the analysis of cosmetic talc for the presence or
	8 Q. And what you wrote was, "One of the criticisms	8	absence of asbestos; right?
	9 leveled at Scotts of this early testing for both bulk	9	A. Yes. I think it was a trade organization
	10 and air sample analysis was the use of PLM, XRD, and	10	standard.
	11 PCM for the quantification of possible amphibole	11	Q. And you know that the UK Cosmetic Trade
	12 contamination and exposure in light of these	12	Association, so the United Kingdom's Cosmetic Trade
	13 instruments' detection limits and specificity for	13	Association, in the 1970s was called the British
	14 amphibole asbestos."	14	Toiletry Preparation Federation; right?
	15 Do you see that?	15	A. That is correct.
	16 A. I do.	16	Q. And the British Toiletry Prep -- Toiletry
	17 Q. And you said, "This would be a valid criticism	17	Preparation Federation developed its own industry
	18 if these analyses were performed today because of the	18	standard for testing of talc; right?
	19 validation and routine use of analytical transmission	19	A. I believe so.
	20 electron microscopes for this type of vermiculite	20	Q. And the British -- and I'm going to call it
	21 amphibole contaminant analysis."	21	"TPF." The British TPF method was XRD; right?
	22 Do you see that?	22	A. I think so. I'd have to look at it to verify
	23 A. Yes, sir.	23	that.
	24 Q. You still agree with that; right?	24	Q. Why don't you look at the binder there that I
	25 A. Yes, I do.	25	have. It's Volume I. If you'd go to Tab K.

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13:11:11	1 A. Volume I? 2 Q. Yeah. 3 MR. MAIMON: What tab? 4 MR. ASHBY: K. 5 THE COURT: Kilo. 6 MR. SATTERLEY: Zero not K. 7 MR. MAIMON: There's nothing in here. Maybe I 8 was -- I have nothing in here. 9 MR. ASHBY: You got the blank book? 10 BY MR. ASHBY: 11 Q. Do you have something in your K, Dr. Longo? 12 A. My K? I'll tell you in a second. 13 Yes. I have something in my K. 14 Q. Okay. Is this a -- all right. 13:11:44 15 So do you see it says, "The British Toilet 16 Preparations Federation is in the process" -- 17 MR. MAIMON: Your Honor, I object. This is not 18 in evidence. I don't -- at least I don't know that it 19 is in evidence. 13:11:56 20 THE COURT: Let's establish a basis before you 21 read the document. 22 MR. ASHBY: This is Plaintiff's 23 Exhibit LE-0971. 24 MR. SATTERLEY: Is it in evidence? 13:12:07 25 MR. ASHBY: I don't know. I don't think it is.	13:13:31	1 Q. "These will involve density concentration 2 technique followed by x-ray analysis." 3 Right? 4 A. Correct. 5 Q. And that's -- when it's talking about x-ray 6 analysis, it's talking about XRD; right? 7 A. Yes, but, more importantly, it's talking about 8 density concentration with XRD, which would greatly 9 increase the sensitivity of it. This would have been a 10 good method if it ever made it through. 11 Q. So let's unpack that a little bit. 12 So this is about concentration method with XRD; 13 right? 14 A. Yes. 13:14:01 15 Q. It's not about concentration method with PLM; 16 right? 17 A. No. That comes later. 18 Q. And it's not about concentration with TEM; 19 right? 13:14:11 20 A. Correct. 21 Q. So what's up for consideration here is 22 concentration with XRD; right? 23 A. Correct. What I was saying, it was never 24 accepted in the final method that I'm aware of. 13:14:21 25 Q. That wasn't my question.
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13:12:20	1 I'm going to lay a foundation right now. 2 BY MR. ASHBY: 3 Q. This is Plaintiff's Exhibit LE-0971. 4 It's dated June 4, 1973; correct? 5 A. That's what it states. 6 Q. And it's a letter from Shelley, S-h-e-l-l-e-y, 7 to Rolle, R-o-l-l-e; correct? 8 A. Correct. 9 Q. Is this a document that you considered before? 13:12:49 10 A. I believe I've seen it before. 11 MR. ASHBY: And this document has been admitted 12 into evidence. 13 MR. SATTERLEY: Then we have no objection. We 14 just wanted to know whether it's admitted. 13:12:59 15 MR. ASHBY: Wanted to make sure I knew what I 16 was doing... 17 John, can you -- 18 Can we publish, Your Honor? 19 THE COURT: Yes. 13:13:15 20 BY MR. ASHBY: 21 Q. So do you see it says, "The British Toilet 22 Preparations Federation is in the process of drafting 23 specifications on talc." 24 Do you see that? 13:13:23 25 A. Yes.	13:14:32	1 A. Oh, I'm sorry. 2 Q. And you've said in your report that the 3 advantage to using XRD is it can analyze very large 4 samples; right? You don't -- you don't dispute that? 5 A. No, sir. I stand by that. 6 Q. And you talked a little bit about PLM -- 7 MR. ASHBY: You can take that down. 8 BY MR. ASHBY: 9 Q. You talked a little bit about PLM. 10 You call PLM the "workhorse"; right? 11 A. Yes, sir. 12 Q. And one of the advantages of P -- to using PLM 13 is that it can positively identify the different 14 regulated asbestos mineral types; right? 13:14:59 15 A. That is correct. 16 Q. I mean, those are your words; right? 17 A. That's why I said it's correct. 18 It's only not my words I have to think about. 19 Q. Well, I -- and PLM can provide a qualitative 20 estimate of weight percent of asbestos; true? 13:15:19 21 A. That's true. 22 Q. And what you told us was that XRD and PLM 23 aren't sensitive enough to detect trace concentrations 24 of amphibole mineral if it's less than 0.01 percent by 25 weight; right?

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<p>1 A. XRD, anything less than .1 now. It used to be 2 .3, .5. PLM -- Blount PLM may be able to get there. 3 We're -- we're somewhere below .1, .01. But the PLM 4 analysis being done today in our lab is not your 13:16:07 5 typical PLM analysis. 6 So PLM analysis should be used, ISO PLM, the 7 Blount PLM. But it has to be understood that the 8 analyst has to spend one to two hours on the sample. 9 It's sort of -- it's not any different methodology, but 13:16:28 10 the time, high resolution, aberration-corrected lenses, 11 digital cameras, you have to put the time in to make it 12 work. But it does work. 13 Q. What you wrote in your report of November 2018 14 is that, "TEM is the only analytical method with the 13:16:47 15 appropriate sensitivity for the analysis of trace 16 mineral concentrations that are less than 0.01 weight 17 percent range." 18 A. That's absolutely correct. Where the 19 modified -- where the PLM method -- 13:17:01 20 Q. I just asked you if you wrote that. That's all 21 I asked you, Dr. Longo. 22 A. Yes, I did write that. And I agree with it. 23 Q. And so, when we looked before at that -- 24 MR. ASHBY: John, can you throw it back up, 13:17:20 25 LE-0973?</p>	<p>1 and using concentration method to improve sensitivity 2 for PLM; right? 3 A. Yes. 4 Q. It wasn't TEM; right? 13:18:35 5 A. No. 6 Q. And are you aware that Dartmouth had also 7 looked at using concentration method? 8 A. Yes. 9 Q. And Dartmouth was looking at it for -- again, 13:18:48 10 for PLM and not TEM; right? 11 A. Well, it wasn't Dartmouth -- Dartmouth was 12 hired by Windsor -- I think it was Cyprus or Windsor -- 13 to look into that, see if they could do it. 14 Q. Okay. My question was, that related to PLM, 13:19:04 15 not TEM for the concentration method. 16 Do you understand my question? 17 A. I do. 18 Q. And Dartmouth was looking at -- was looking at 19 the concentration method for PLM; right? 13:19:15 20 A. Yes, sir. 21 Q. And there was some discussion -- you talked 22 about Dr. Blount. And Dr. Blount had a concentration 23 method as well; right? 24 A. She published it in 1989, 1990. Yes. That's 13:19:29 25 right.</p>
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<p>1 BY MR. ASHBY: 2 Q. So when we looked at this before, this is 3 actually -- they're talking about here, if you see, "In 4 order to check this, please send samples of Vermont 13:17:29 5 talc from different batches directly to Fred Pooley." 6 Do you see that? 7 A. I do. 8 Q. So what they're talking about here is the idea 9 of using XRD to improve -- or using -- I'm sorry. I'll 13:17:44 10 strike that. 11 They're using concentration to improve the 12 sensitivity of XRD; right? 13 A. That's correct. 14 Q. And you're aware that there were other 13:17:55 15 organizations looking at the concentration technique to 16 improve the sensitivity of other analytical tools; 17 right? 18 A. Colorado School of Mines, a professor from... 19 Q. I just asked if you're aware. 13:18:12 20 A. Oh, I thought you asked me who they were. I'm 21 aware. 22 Q. And one of them was Colorado School of Mines; 23 right? 24 A. That's correct. 13:18:21 25 Q. And Colorado School of Mines was looking at PLM</p>	<p>1 Q. Right. So 1990 she began looking at it because 2 she was testing it as a way to make a more rapid and 3 equally accurate way of looking for amphibole in talcum 4 powder; right? Or in the talc ore really. 13:19:45 5 A. Well, she had been doing it for some years. 6 She published it in 1990 to make it more -- the 7 analysis more sensitive. 8 Q. And that, again, was having to do with PLM, not 9 TEM; right? 13:20:04 10 A. That's correct. 11 MR. ASHBY: John, could you -- 12 BY MR. ASHBY: 13 Q. So this was one -- you had this earlier. This 14 is going to be Tab M. This is L-0307. It's one of the 13:20:19 15 articles you and Mr. Maimon talked about. Mr. Maimon 16 actually put up the picture from this article of the 17 graph. 18 THE COURT: Is this article -- 19 MR. ASHBY: Yes. So it's the 1990 Dr. Blount 13:20:35 20 article, and it's Tab M. It also has an exhibit number 21 of L -- Plaintiff's Exhibit numbered L-0307. 22 Can I publish, Your Honor? 23 THE COURT: Yes. 24 MR. ASHBY: John, do you mind pulling up the 13:21:04 25 part. Next part. Where it says -- on the next</p>

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<p>1 page where it says "because." There we go. 2 BY MR. ASHBY: 3 Q. So this is Dr. Blount in 1991 where she's 4 publishing the results of her heavy density liquid 13:21:30 5 separation -- we're also calling it "concentration 6 method" -- via PLM; right? 7 A. Yes. 8 Q. And what she says is she's trying to find -- 9 she's developing -- "A more rapid and equally accurate 13:21:44 10 method has been developed based on concentrating the 11 amphibole particles by density difference." Right? 12 That's what she wrote? 13 A. Yes, sir, that's what it states. 14 Q. And when she says "equally accurate method," 13:21:59 15 what she's referring to -- the other method she's 16 referring to is what you call it the "long method" of 17 looking at analytes or samples for amphibole minerals; 18 right? 19 A. That's correct. 13:22:10 20 Q. And the long method is where you don't 21 concentrate, you just have to go through -- it just 22 takes a little longer to go through the sample that you 23 have, right, because you have to look at many more 24 fields of view; true? 13:22:21 25 A. Sort of.</p>	<p>1 Q. And you -- and you know that Johnson & Johnson 2 used the McCrone lab to do its TEM testing; right? 3 A. That is correct. 4 Q. You're familiar with the McCrone lab -- you've 13:23:50 5 hired folks from the McCrone lab, haven't you? 6 A. I have. 7 Q. More than one. You hired Mike Mount and 8 Richard Hatfield; right? 9 A. Yes and no. 13:23:59 10 Q. You didn't hire them? 11 A. I hired Richard Hatfield, but he wasn't working 12 at McCrone. 13 Q. Well, he had worked at McCrone; right? 14 A. He ran the Atlanta office. 13:24:10 15 Q. Okay. You testified McCrone was literally the 16 best lab in the country in the time frame of the 1970s 17 and '80s; right? 18 A. I've said that in the past. 19 Q. Well, in fact, for when you did that work for 13:24:24 20 Scotts and Scotts had that problem where they were in 21 the litigation you were defending them, one of the labs 22 they used was McCrone; right? 23 A. It was. 24 Q. And you had looked at McCrone's test results 13:24:35 25 and you used those as a basis to say that Scotts had</p>
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<p>1 Q. Tell me where I'm wrong. 2 A. It's more than just looking at a little bit 3 more. You have to spend the time because you have the 4 talc covering a lot of the particulates. If you are 13:22:33 5 going to get the same accuracy as the heavy density 6 liquid method and you're not using that, you have to go 7 through and look at a tremendous amount more material 8 because it is more accurate if you count more 9 structures at any particular time. 13:22:49 10 So that's why I said "sort of." You're right, 11 but it's not just looking at it a little bit more. 12 Q. It's not just me. Dr. Blount says it's equally 13 accurate; right? 14 A. I'm not taking -- I'm not taking issue with 13:23:03 15 that. Just the issue with -- you have to look at it a 16 little bit more. It -- it's more than just that. 17 Q. And you told us that TEM -- 18 MR. ASHBY: Thank you, John. 19 BY MR. ASHBY: 13:23:19 20 Q. TEM is more sensitive than PLM and XRD; right? 21 A. Yes. 22 Q. And you know that Johnson & Johnson used TEM to 23 look for amphiboles and asbestos in talcum powder 24 beginning in the 1970s; right? 13:23:36 25 A. I do.</p>	<p>1 done the proper thing by using PLM and XRD to do their 2 analysis; right? 3 A. At that time I said that, that's -- that's what 4 I believed. 13:24:49 5 Q. So the J4-1 Method was XRD, and if there's a 6 positive, then a PLM; correct? 7 A. Correct. If there was a positive PLM; if it 8 was a negative, they stopped. 9 Q. Right. So that was the industry standard for 13:25:13 10 cosmetic talc; true? 11 A. I don't know how industry standard it was. And 12 I'm not criticizing the use of XRD. It's just what -- 13 how you interpret today or in the past documents and 14 what was really found or not found. 13:25:31 15 Q. Understood. 16 The use of TEM, we can agree, though, exceeds 17 that standard if you're looking for asbestos in a talc 18 sample? 19 A. Exceeds the XRD standard? 13:25:48 20 Q. Right. 21 A. It's a better tool than the XRD. It's how you 22 run the tool or how you prepare the sample makes all 23 the difference. The tool is a good tool. 24 Q. Right. And when you say it's how you prepare 13:26:00 25 it, you're talking about that -- if you use the</p>

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<p style="text-align: right;">Page 198</p> <p>1 concentration method or indirect preparation method or 2 direct preparation method, those sorts of things; 3 right? 4 A. Right. How much are you going to -- how much 13:26:10 5 are you going to look at? 10 grids versus 500 grids? 6 Are you -- what is your, quote, background that you're 7 going to use to, in my opinion, invalidate results? I 8 mean, it all depends on what you do. 9 Q. Well, you've testified in the past that if you 13:26:27 10 take representative samples and take enough different 11 samples, you get an idea of the distribution of 12 asbestos fibers, even in a ton of material. 13 You testified to that; right? 14 A. I have. That's not what I'm criticizing here, 13:26:44 15 though. 16 Q. And when we talk about a ton, I'm talking about 17 an actual ton, 2,000 pounds; right? 18 A. 2,000 pounds is one ton. We agree on that. 19 Q. Okay. Fair enough. 13:26:56 20 But my point is you've testified in the past 21 that you can take these little bitty samples from a ton 22 of talcum powder and if you take enough of those little 23 bitty samples, that's representative of the entire 24 2,000 pounds of material? 13:27:09 25 A. Yes. I think you're sort of misconstruing what</p>	<p style="text-align: right;">Page 200</p> <p>1 into composites. 2 You know -- you know what a composite is; 3 right? 4 A. Yes, sir. 13:28:39 5 Q. And we can agree that a composite -- 6 MR. SATTERLEY: Can you show him the document? 7 MR. ASHBY: It's sitting there. 8 THE COURT: Let him ask the question. 9 MR. SATTERLEY: I apologize. 13:28:52 10 MR. ASHBY: I'm sorry. 11 BY MR. ASHBY: 12 Q. I'm sorry, Doctor. 13 A. That's fine. 14 Q. So Johnson & Johnson did this regime of TEM 13:29:07 15 testing both monthly and quarterly from the 1970s and 16 onward. 17 You've testified to that before; right? 18 A. I don't think I testified to that. Maybe 19 somebody showed me a document and I read it. 13:29:40 20 MR. ASHBY: Your Honor, do you want to -- 21 THE COURT: I think we're at the bewitching 22 hour. Let's stop right here. 23 So we're going to stop here. Just to remind 24 you next Tuesday is a holiday. So have a great time. 13:29:56 25 I hope your work lets you off, too, but otherwise, have</p>
<p style="text-align: right;">Page 199</p> <p>1 I said. If you take enough samples. You know, if we 2 take the 10-ounce bottle and we take one sample, I 3 think that is pretty representative of that 10-ounce 13:27:26 4 bottle. If you're taking one sample of two tons, which 5 may be a million of those bottles, no, that is not 6 representative. 7 Q. Okay. How many is enough? If you take enough 8 composite samples, you get enough of a representation 9 of even a ton of material; right? 13:27:42 10 A. At some point, yes. 11 Q. You wouldn't criticize a company for using TEM 12 to look for amphiboles in talc simply because TEM only 13 analyzes a small amount of talc; right? 14 A. No. The tool and what you use is good. It's 13:27:59 15 the -- it's the best method for analyzing for talc. 16 But if you don't get the right analytical sensitivity 17 into the range of what you're going to see there, then, 18 no, it is not a good method to use. 19 Q. And you know Johnson & Johnson took hourly 13:28:16 20 samples of talc; right? 21 A. I guess, yes. 22 Q. Well, did you know that or not? 23 A. I guess I'd have to see the document that they 24 were taking hourly samples and analyzing for TEM. 13:28:33 25 Q. And they took these samples and they put them</p>	<p style="text-align: right;">Page 201</p> <p>1 a great weekend. See you next week. 2 No -- no discussion in any way in any form to 3 inform about the case. 4 Thank you. 13:30:07 5 See you later. 6 (Whereupon, the jury having exited the 7 courtroom, the following proceedings were held:) 8 THE COURT: All right. So a question I had, 9 and this is just further illustrated is the timing of 13:31:22 10 all this, where nobody is getting done on the time 11 anyone's projecting. 12 Have you sat down and figured out where we're 13 going on this, Counsel? 14 MR. SATTERLEY: Your Honor, me and Mr. Maimon 13:31:31 15 did, and unfortunately the number of objections that 16 we've encountered have been greater than we 17 anticipated. We have withdrawn witnesses and we're 18 still working on a stipulation. I've been reaching out 19 to defense counsel this week to see if we can work on a 13:31:45 20 stipulation about economics and to the ability to pay 21 evidence because we have -- the ability to pay, we have 22 financial witnesses that we've subpoenaed or we've 23 deposed that we would play deposition of. 24 THE COURT: Ability to pay -- 13:31:59 25 MR. SATTERLEY: Because they chose to do a</p>

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<p>1 one-issue trial, the financial --</p> <p>2 THE COURT: Oh, the defense did.</p> <p>3 MR. SATTERLEY: Yeah.</p> <p>4 So there -- for example, there is -- there is a</p> <p>13:32:07 5 corporate representative from J&J that we've deposed</p> <p>6 that we've designated page and lines.</p> <p>7 We've subpoenaed the comptroller in Imerys and</p> <p>8 we got Robert Johnson on that issue. We got Robert</p> <p>9 Johnson on economics.</p> <p>13:32:23 10 So I proposed to defense counsel, in exchange</p> <p>11 for a stipulation on the economics, I will be --</p> <p>12 welcome a stipulation on the ability to pay number so</p> <p>13 we can eliminate all those witnesses on that topic.</p> <p>14 We're still meeting and conferring on that, and we've</p> <p>13:32:41 15 met and conferred, Mr. DeJardin and I, this morning and</p> <p>16 hopefully we can make progress tomorrow -- today,</p> <p>17 tomorrow, and over the weekend. So we will have more</p> <p>18 of a report in the regard next week.</p> <p>19 We have a live -- and I have advised defense</p> <p>13:32:56 20 counsel of this -- several depositions that we're not</p> <p>21 going to play and we're not going to play the -- we had</p> <p>22 three or four hours of testimony of Julie Pier from the</p> <p>23 Lanzo trial, we just don't have time to play it. Even</p> <p>24 though it's great, valuable evidence, we're not going</p> <p>13:33:11 25 to be able to play that.</p>	<p>1 discussion about things.</p> <p>2 THE COURT: You're not offering Horn on</p> <p>3 causation.</p> <p>4 MR. SATTERLEY: If I can get a stipulation with</p> <p>13:34:33 5 defense counsel on the issue, I can meet and confer on</p> <p>6 that. I'm not going to go through any -- general</p> <p>7 causation maybe, but no specific causation.</p> <p>8 MR. ASHBY: We would object. It's cumulative.</p> <p>9 I understand why they need him to do reasonable and</p> <p>13:34:45 10 necessary on medical expenses.</p> <p>11 MR. SATTERLEY: We got medical expenses --</p> <p>12 THE COURT: I understand the damage part.</p> <p>13 MR. SATTERLEY: So I would request that we have</p> <p>14 an opportunity to meet and confer before you lock me on</p> <p>13:34:54 15 a position on this.</p> <p>16 THE COURT: I'm not going to lock you in yet.</p> <p>17 I would just express causation questions some concern</p> <p>18 about being cumulative there. I mean, I have at least</p> <p>19 two or three of these so far.</p> <p>13:35:07 20 MR. SATTERLEY: And, Your Honor, they have</p> <p>21 three or four themselves, so I assume they're going to</p> <p>22 withdraw some of those. But the other -- so I guess my</p> <p>23 point is, going forward, we had to -- just off the top</p> <p>24 of my head, we have documents that we still need to get</p> <p>13:35:20 25 into evidence that I have sent over to defense counsel</p>
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<p>1 So going forward -- so I can sort of -- I don't</p> <p>2 even know what today he's going to do to schedule</p> <p>3 because I don't know Dr. Longo's schedule. I haven't</p> <p>4 talked to him about it.</p> <p>13:33:21 5 Going forward, my original plan was to have</p> <p>6 Dr. Horn here next week and I'm going to have Dr. Horn</p> <p>7 address damages for the most part, and I'm going to try</p> <p>8 to reach out to defense counsel to see if I can get a</p> <p>9 stipulation to shorten that. I'm going to do Dr. Horn.</p> <p>13:33:38 10 I don't know if Dr. Egilman's going to be here</p> <p>11 Monday, or Dr. Longo or Dr. Horn. So I got to figure</p> <p>12 that out. So we have to finish those three witnesses.</p> <p>13 And when I say "damages" with Dr. Horn, it's</p> <p>14 talking about x-rays. The jury has not seen the</p> <p>13:33:52 15 x-rays, the CT scans, things of that nature.</p> <p>16 So that's what we anticipate there.</p> <p>17 THE COURT: You have other experts or is that</p> <p>18 it?</p> <p>19 MR. SATTERLEY: Well, we have Bob Johnson if we</p> <p>13:33:59 20 can't reach a stipulation. We have Bob Johnson. And I</p> <p>21 believe that is all of our expert witnesses.</p> <p>22 We're withdrawing Smith. We're withdrawing</p> <p>23 Moline. We haven't talked about Madigan. We'll let</p> <p>24 counsel know whether we'll withdraw Madigan. I got</p> <p>13:34:24 25 to -- Ms. Clancy and I are going to have to have a</p>	<p>1 at the beginning of the case. Through the request for</p> <p>2 admissions.</p> <p>3 We have Dean McElroy, the plaintiff, which will</p> <p>4 be roughly an hour of testimony or less.</p> <p>13:35:31 5 I have Terry Leavitt will be an hour to an hour</p> <p>6 and 15 minutes of direct testimony from us.</p> <p>7 I have -- we have Susan Leavitt which will be</p> <p>8 30 minutes of testimony.</p> <p>9 We have Pat Downey, which, right now it's over</p> <p>13:35:46 10 four hours of video, but we're going to work to cut</p> <p>11 that down. And I know I'm skipping --</p> <p>12 Oh, we have -- we have one video, 15-minute</p> <p>13 video, of a -- of an exposure witness that -- and I</p> <p>14 think the video, we may or may not play that.</p> <p>13:36:01 15 And we have one other friend we may or may not</p> <p>16 call. Ms. Wheaton.</p> <p>17 And I'm probably missing some evidence.</p> <p>18 THE COURT: So what are you projecting?</p> <p>19 MR. SATTERLEY: Well, what I really need to</p> <p>13:36:12 20 do --</p> <p>21 THE COURT: How many more days do you think</p> <p>22 you're going to need to put on your case?</p> <p>23 MR. SATTERLEY: Well, I don't know because I</p> <p>24 don't know how long defense counsel -- Mr. Brown told</p> <p>13:36:19 25 me this morning he's got three hours more</p>

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<p>1 cross-examination of Dr. Egilman. And so I can't say 2 end date on when I'm going to rest with the uncertainty 3 of how long their crosses are going to be. 4 So what I suggest that we can do is meet and 13:36:38 5 confer tomorrow. We're not in session tomorrow. We 6 can send over a proposal on what we think. Yesterday I 7 sent the proposal over for today, which was rejected, 8 and -- but I think we should just meet and confer and 9 try to work -- work through this. 13:36:52 10 MR. RICHMAN: Just in response, Your Honor -- 11 MR. SATTERLEY: Before I finish. I'm sure I'm 12 missing some evidence that I haven't told Your Honor 13 about, so I don't want to be accused later, well, he 14 never said on that Thursday that there was going to be 13:37:06 15 any -- oh, and McCarthy, for example, me and 16 Mr. DeJardin were meeting and conferring a few weeks 17 ago about whether we could make some stipulations to 18 not call Ed McCarthy, Imerys -- 19 THE COURT: Let me put it this way: I'm going 13:37:17 20 to want a further report next week as to where we are. 21 Yes? 22 MR. RICHMAN: Thank you, Your Honor. I'll just 23 address a couple points. 24 First of all, with the economic stipulation, 13:37:26 25 Mr. Satterley had proposed one weeks ago. We told</p>	<p>1 Plaintiffs have indicated they're calling at a minimum 2 three family members -- two plaintiffs, the plaintiff's 3 mother. Potentially two friends, the Downey video, 4 which is four hours, which would be at least one plus 13:39:02 5 court days. So there is -- frankly, in that 6 schedule -- and I'm putting the economic damages -- 7 well, all damages to the side -- plaintiffs are 8 basically saying we could go another two weeks, which 9 is just simply six court days. So I think that's 13:39:16 10 really what our concern is, and I don't want to, for 11 lack of a better word, kind of kick the can down the 12 road, which is part of the reason we raised it with the 13 Court yesterday, because we're trying to get our 14 experts scheduled as well, and we're getting very 13:39:29 15 little, I guess, finality as far as when we can expect 16 to take the case. 17 THE COURT: Well, I think there is one point 18 here, though, is until we know how long the 19 cross-examinations are, that that -- you know, we have 13:39:41 20 two -- two witnesses in play right now, and -- 21 And what are the estimates for Egilman and 22 Longo for cross-X? 23 MR. BROWN: Your Honor, if I may, we're working 24 on cutting Egilman down to try to get it close to the 13:39:56 25 two hours, but I still think that'll probably be as</p>
Page 207	Page 209
<p>1 him it was rejected. We didn't think we were going to 2 be able to reach one. 3 THE COURT: Would you step outside, please. 4 MR. RICHMAN: So Mr. Satterley proposed an 13:37:49 5 economic stipulation weeks ago. We had rejected it. 6 There had been no communication from him until, I 7 believe, a day or two ago. We can put that issue to 8 an -- as an aside. Let's say -- 9 MR. SATTERLEY: I apologize. Can I correct the 13:38:03 10 record? 11 MR. RICHMAN: No, no, no. 12 THE COURT: No. 13 MR. RICHMAN: So then put the damages issues to 14 the side. 13:38:11 15 The problem we have now, Your Honor, is there 16 are nine trial days remaining in this month. The 17 last -- well, actually the next three weeks are all 18 three-day weeks. There's a -- Court has a dark day on 19 the 12th, the 18th, and the 20th. So we are sort of in 13:38:27 20 the position of the defendants having, I would say, at 21 a minimum, eight to ten -- at least eight witnesses, if 22 not more, very likely more. 23 Plaintiffs now have proposed that they still 24 have -- we still have to conclude the cross-examination 13:38:43 25 of Dr. Egilman, the cross-examination of Dr. Longo.</p>	<p>1 good as it gets. 2 THE COURT: I hear you. 3 MR. BROWN: The problem is redirect, recross. 4 THE COURT: I know. I know. 13:40:05 5 MR. BROWN: Jury questions. 6 THE COURT: Jury questions. 7 We appreciate that. 8 And what about Longo, any ballpark on him? 9 MR. ASHBY: I'm on -- 13:40:14 10 THE COURT: I know you just started -- 11 MR. ASHTON: I'm on page 29 of like 120, but... 12 THE COURT: That's a disturbing figure. 13 MR. MAIMON: It's really disturbing because I 14 only had eight pages in my outline. 13:40:28 15 MR. ASHBY: He's just a better lawyer. 16 THE COURT: There's different types of 17 outlining technique. 18 MR. SATTERLEY: Your Honor, I just want to 19 correct the record. Mr. Richman once again made a 13:40:36 20 misstatement. I don't know if it's intentional or not, 21 but he said that they rejected -- they rejected my 22 economic stip. He actually accepted it and said, we 23 would be willing to do it but Imerys rejected it. 24 MR. RICHMAN: That is a misstatement, 25 Your Honor.</p>

53 (Pages 206 to 209)

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<p>1 MR. SATTERLEY: Pardon?</p> <p>2 MR. RICHMAN: That is a total misstatement.</p> <p>3 THE COURT: I don't want to hear about their</p> <p>4 negotiations.</p> <p>13:40:57 5 Nobody talk about negotiations on agreements.</p> <p>6 Go ahead.</p> <p>7 MR. DEJARDIN: I do have a question,</p> <p>8 Your Honor. I don't remember what we told the jury --</p> <p>9 what we told the jury as far as when you expected to</p> <p>13:41:05 10 get -- give them the case.</p> <p>11 THE COURT: What I told them -- and I gave a</p> <p>12 little fudge factor -- I said March 4 or 5 is what I</p> <p>13 told them. And, you know, if there's -- if there's a</p> <p>14 slippage of a day, I don't think anyone's going to</p> <p>13:41:20 15 shoot anybody.</p> <p>16 I will look at the hours that are there, but</p> <p>17 I'm not making a decision yet about when the -- when</p> <p>18 the hammer comes down. But I just want to encourage</p> <p>19 everyone to start streamlining your cases and look at</p> <p>13:41:35 20 that and we'll see where we go.</p> <p>21 I will count up tomorrow, if not today, where</p> <p>22 the hours are so you all see where you are so far.</p> <p>23 MR. SATTERLEY: Your Honor, I just wanted to</p> <p>24 raise it so we'll weigh this at a future time is we've</p> <p>13:41:52 25 been spending a lot of time in bench conferences --</p>	<p>1 THE COURT: Have a good one, trip home,</p> <p>2 wherever that might be.</p> <p>3 Actually, once -- plaintiffs counsel, once you</p> <p>4 know what the lineup next week, can you just let me</p> <p>13:43:16 5 know a ballpark.</p> <p>6 MR. SATTERLEY: Oh, Your Honor, one other</p> <p>7 thing. Can we be on the record?</p> <p>8 I sent this morning an email to all counsel of</p> <p>9 record regarding the proposed stipulation regarding the</p> <p>13:43:25 10 Chinese talc and I'll read it into the record and I --</p> <p>11 or I can just email it to Your Honor and carbon copy</p> <p>12 all counsel a proposed stipulation.</p> <p>13 THE COURT: What I would rather see is if</p> <p>14 there's an agreement on the stipulation, let me know</p> <p>13:43:39 15 that, and if there's a dispute, we'll talk about it on</p> <p>16 Monday.</p> <p>17 MR. SATTERLEY: If I could just read into the</p> <p>18 record my proposal just so we made a record of this.</p> <p>19 "Johnson & Johnson talcum powder stopped the use of</p> <p>13:43:50 20 Vermont talc in 2003 and replaced it with Chinese talc.</p> <p>21 The evidence and testimony as to Chinese talc does not</p> <p>22 relate to the claims that Ms. Leavitt brought about her</p> <p>23 exposure to Johnson & Johnson talcum powders which</p> <p>24 predated 2003."</p> <p>13:44:06 25 That -- I propose that to comply with Your</p>
Page 211	Page 213
<p>1 THE COURT: I know.</p> <p>2 MR. SATTERLEY: -- and last week, particularly</p> <p>3 with Mr. Hopkins. Hopkins was on the witness stand for</p> <p>4 five days, five full days, and we spent a lot of time</p> <p>13:42:09 5 in Your Honor's chambers, and I would just request,</p> <p>6 Your Honor, to take that into consideration when</p> <p>7 discussing -- or putting the time down.</p> <p>8 THE COURT: I certainly will. And I -- and I</p> <p>9 generally do. So don't worry. I'm not -- I'm not</p> <p>13:42:25 10 doing this in a second-by-second analysis. And no one</p> <p>11 is going to get cut off, you know, at 1903 seconds.</p> <p>12 I'm going to -- there will be some fudge factor built</p> <p>13 in there, but there's a ballpark we're talking about to</p> <p>14 try and bring this ship in.</p> <p>13:42:41 15 So I'm going to leave it at that for the</p> <p>16 moment. I do want to hear back on Monday what the plan</p> <p>17 is and particularly, you know, estimates of how long</p> <p>18 witnesses are going to take are very helpful.</p> <p>19 Anything else today?</p> <p>13:42:57 20 MR. SATTERLEY: No, Your Honor.</p> <p>21 MR. MAIMON: Thank you, Your Honor.</p> <p>22 MR. RICHMAN: No, Your Honor.</p> <p>23 THE COURT: Have a good weekend.</p> <p>24 MR. BROWN: See you, Judge, have a good</p> <p>25 weekend.</p>	<p>1 Honor's request to take out the pattern and practice</p> <p>2 portion. So we would request that limiting instruction</p> <p>3 if they're going to go into Chinese talc.</p> <p>4 MR. RICHMAN: Just while we're on the record,</p> <p>13:44:24 5 we consider and reject Mr. Satterley's offer.</p> <p>6 THE COURT: All right. Well --</p> <p>7 MR. SATTERLEY: That's nice.</p> <p>8 THE COURT: What I would ask the parties to</p> <p>9 do is --</p> <p>10 Folks, hold on. Hold on, please.</p> <p>11 I want to hear Monday morning what the parties'</p> <p>12 positions are on that or at least before -- I don't</p> <p>13 know if Longo is here on Monday. If Longo is here on</p> <p>14 Monday -- before Longo goes on again, I want to</p> <p>13:44:47 15 discuss -- come back to this, so, parties, I encourage</p> <p>16 you to continue working on it. If worse to comes to</p> <p>17 worst, I'm going to have to devise my own limiting</p> <p>18 instruction and probably make nobody happy.</p> <p>19 So that's it. Thank you.</p> <p>20</p> <p>21 (Whereupon, the proceedings</p> <p>22 were concluded at 1:44 p.m.)</p> <p>23</p> <p>24</p> <p>25</p>

54 (Pages 210 to 213)

1 STATE OF CALIFORNIA)

2) ss.

3 COUNTY OF ALAMEDA)

4

5 I, EARLY K. LANGLEY, do hereby certify:

6 That foregoing proceedings were held in the
7 above-entitled action at the time and place therein
8 specified;

9 That said proceedings were taken before me at said
10 time and place, and was taken down in shorthand by me,
11 a Certified Shorthand Reporter of the State of
12 California, and was thereafter transcribed into
13 typewriting, and that the foregoing transcript
14 constitutes a full, true and correct report of said
15 proceedings that took place;

16 IN WITNESS WHEREOF, I have hereunder subscribed my
17 hand on February 7, 2019.

18

19

20

21

22



EARLY K. LANGLEY, CSR No. 3537

State of California

23

24

25

Exhibit 81

In The Matter Of:

*Donna Olson and Robert Olson v.
Brenntag North America, Inc. et al*

February 25, 2019

Original File 22519Olson.txt

Min-U-Script® with Word Index

February 25, 2019

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1
2 SUPREME COURT OF THE STATE OF NEW YORK
3 COUNTY OF NEW YORK - CIVIL TERM - PART 7
4 -----X
5 DONNA A. OLSON and ROBERT M. OLSON,
6
7 Plaintiff,
8
9 -against- Index No.
10 190328/2017
11 BRENNTAG NORTH AMERICA, INC.;
12 BRENNTAG SPECIALTIES, INC.,
13 Individually, and f/k/a Mineral Pigment
14 Solutions, Inc., as successor-in-interest to
15 Whittaker, Clark & Daniels, Inc.,
16 CYPRUS AMAX MINERALS COMPANY,
17 Individually and as successor-in-interest to
18 American Talc Company, Metropolitan Talc
19 Company, Inc., Charles Mathieu, Inc., and
20 Resource Processors, Inc.;
21 IMERYS TALC AMERICA, INC.,
22 JOHNSON & JOHNSON CONSUMER, INC.;
23 WHITTAKER, CLARK & DANIELS, INC.,
24 Individually and as successor-in-interest
25 To American Talc Company, Metropolitan Talc
26 Company, Inc., Charles Mathieu, Inc., and
Resource Processors, Inc.;

Defendants.
-----X

17 Jury Trial 60 Centre Street
New York, New York
February 25, 2019

19 B E F O R E:

20 HONORABLE GERALD LEBOVITS,
21 JUSTICE

22 A P P E A R A N C E S:

23 LEVY KONIGSBERG, LLP
24 ATTORNEYS FOR THE PLAINTIFFS
25 800 THIRD AVENUE
26 NEW YORK, NEW YORK 10022
BY: JEROME H. BLOCK, ESQ.,

-AND-

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1
2
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21 BARRY E. FIELDS, ESQ.,
22 ALLISON RAY, ESQ.,

23
24
25
26

Lori A. Sacco
Michael Ranita
Official Court Reporters

* * *

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PROCEEDINGS

1 THE COURT: Good morning everyone. And we
2 hope that you all had a wonderful weekend. Whenever
3 I see the lawyers standing and remaining standing
4 after court begins, I wonder why they are standing.
5 It must be because they are very enthusiastic. A
6 wonderful morning so far. This is the agenda as I
7 propose for this morning.
8
9 First we're going to bring down juror number
10 five. I think that is required by the Appellate
11 Division First Department case on point, and I'll
12 give you the citation in a few minutes and we'll see
13 where that goes. The law is that I may not simply
14 excuse for without speaking to her, because that
15 would violate the rights of one side or both sides in
16 this trial. And similarly I may not do that with
17 juror number five without speaking to that juror
18 regardless -- with juror number four, regardless of
19 juror number five has to say, because that would
20 potentially violate the rights of one side or the
21 other or both. And it would be awfully impolite to
22 jurors four or five simply to excuse either or both
23 of them without speaking to them.
24
25 Conversely, I cannot turn the inquiry into a
26 trial within a trial. That would be disrespectful
and it would wind up with jurors being very unhappy

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PROCEEDINGS

1 with all of us and it wouldn't do any good.
2
3 So, the case law suggests that we need to
4 tread very lightly on this issue. And to the extent
5 that we could get some consent agreements, that would
6 be terrific. Once we resolve the question of four
7 and five, and I would like to do that first, because
8 I'm sure juror number five is not very happy that we
9 didn't resolve her claim on Friday, but it was 4:30
10 and it was impossible. But she doesn't want to sit
11 around probably with juror number four longer than
12 she has to. I think we should resolve that first.
13
14 The next thing we should do is go back to
15 juror number three. And I did plenty of research on
16 that as well. There are two Court of Appeals
17 opinions, I'll give you the citations, dealing in the
18 criminal context and in different procedural aspects
19 with what we should do. But it comes down to this.
20 If a juror states that he or she is biased in favor
21 of one side or another or has an issue that would
22 cause that juror not to be suitable for one reason or
23 another, in other words, challengeable for cause,
24 then the Court must conduct an inquiry and assure
25 that the juror unequivocally states that he or she is
26 committed to a fair trial. And we'll decide the case
based only on the evidence and not on any external

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1 PROCEEDINGS
2 factor.
3 I read the minutes from Friday morning, but I
4 know that we had a further inquiry Friday afternoon,
5 and I don't have those minutes from Friday afternoon.
6 Does anybody have those minutes?
7 MR. BROCK: I have them, your Honor. I'm
8 happy to bring them up. You're talking about the
9 transcript of the conversation with her?
10 THE COURT: The second one.
11 MR. BROCK: Yes.
12 THE COURT: And you have that already?
13 MR. BROCK: Yes.
14 MR. BLOCK: I do.
15 THE COURT: That's excellent then. I would
16 like to read it before I speak to juror number three,
17 and I know that you're going to have arguments about
18 this. I would like to read it for myself first to
19 see whether or not she said anything equivocal or
20 unequivocal.
21 The next thing --
22 MR. BROCK: With permission, your Honor, I
23 will let you know what that is. It's a clip of all
24 of your questions and answers. So it's not in
25 consecutive pages. The second, the afternoon session
26 will be towards the back of that document.

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1 PROCEEDINGS
2 THE COURT: Well, I thank you very much.
3 MR. HARTLEY: Your Honor, we have an actual
4 copy of the transcript rather than --
5 THE COURT: And so do I. I just got one
6 right now.
7 MR. BLOCK: Your Honor, could I say one
8 thing?
9 THE COURT: Yes. In a moment. So then we'll
10 continue on with the Court's rulings on most of your
11 evidentiary issues.
12 MR. BLOCK: We -- we would say, your Honor,
13 that we know that there are some pending rulings on
14 documents, on Dr. Vaughn's video. However, I wanted
15 to alert the Court that we have an out of town
16 witness today, Dr. William Longo. Dr. Longo is here
17 from Atlanta. He's available to testify today and
18 tomorrow. I think it's achievable to get Dr. Longo
19 done today, tomorrow, so long as we have sufficient
20 court time. I know these juror issues are important
21 to deal with, and I fully understand we have to deal
22 with them. Once we have dealt with the juror issues,
23 we're prepared to call Dr. Longo as our next witness.
24 As we explained, Dr. Webber was not available to come
25 back, but we are booking a date for him to come back
26 to complete his cross examination and any redirect,

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1 PROCEEDINGS
2 et cetera. So, I wanted to alert the Court that --
3 that we do have a witness that we would like to call
4 once we resolve the juror issues.
5 THE COURT: Is that a different way of saying
6 that I shouldn't decide the evidentiary issues until
7 after Dr. Longo testifies, because you need him to
8 testify right now?
9 MR. BLOCK: We do not -- we do not need a
10 ruling on the documents that you heard argument about
11 the other day and we do not need a ruling.
12 THE COURT: The other day. I'm hearing
13 arguments every day.
14 MR. BLOCK: Okay. Your Honor, no. There are
15 no rulings that the plaintiff needs in advance of Dr.
16 Longo's testimony this morning.
17 MR. BROCK: So, your Honor, from our
18 perspective, we have a motion in limine with regard
19 to Dr. Longo. And I believe as we discussed when we
20 were talking about the witness' motions, and hearing
21 them just in advance of their testimony, we do need a
22 few minutes on Dr. Longo this morning, maybe ten or
23 15 minutes to present our -- our position on his
24 qualifications. Get some of his opinions. I think
25 when we have done that, he's either in or out.
26 That's out of the way and we'll have that done.

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1 PROCEEDINGS
2 THE COURT: So, you agree I shouldn't decide
3 the other issues, the documents, the hearsay, the
4 business records, the stipulations, the depositions?
5 MR. BROCK: We have objections to some of the
6 exhibits that they, I think, plan to use today.
7 THE COURT: Whether it's admissible for the
8 truth or notice or other reasons. I have decisions
9 on everything except Dr. Blount and 53-A and B.
10 MR. BROCK: Okay.
11 MR. BLOCK: Your Honor, we are --
12 THE COURT: Later.
13 MR. BLOCK: Right. We're prepared to move
14 forward. And we think, of course I understand you're
15 going to hear their motion on Dr. Longo, once that
16 motion is heard, we think we could proceed from
17 there.
18 THE COURT: Okay. So, I propose then if
19 that's what you all want to do, that we resolve four
20 and five and then we go to three and then we hear the
21 evidentiary issues about Dr. Longo. Assuming that
22 Dr. Longo testifies, we'll hear from Dr. Longo
23 quickly. And if Dr. Longo doesn't testify, then
24 we'll go into the evidentiary rulings. Otherwise the
25 evidentiary rules will come on if you want them on
26 Thursday. By Thursday they will be in writing for

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1 PROCEEDINGS

2 you.

3 MR. BLOCK: Okay.

4 THE COURT: Because this is what I plan to do

5 with all of your objections, given that this is the

6 first asbestos talc trial.

7 MR. BLOCK: Thank you.

8 THE COURT: It will be a blueprint for all

9 future trials on every single one of your issues with

10 citations.

11 MR. BLOCK: Okay.

12 THE COURT: Okay.

13 MR. BROCK: We might need to object more.

14 I'm just teasing.

15 THE COURT: You most certainly can.

16 MR. BROCK: I know that. I know that.

17 THE COURT: You might want to save your

18 objections for after you hear the rulings rather than

19 before.

20 MR. BROCK: Exactly. Exactly.

21 THE COURT: And for those of you who know

22 Judge Mendez, hello. Those of you who don't, this is

23 Judge Mendez, who is the supervising judge for

24 asbestos matters in New York City.

25 MR. BROCK: I was going to mention, I would

26 like to have a video, I would like to show your Honor

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1 PROCEEDINGS

2 of the program that Ms. -- that juror number three

3 watched on Friday morning.

4 THE COURT: That's impressive. How do you

5 know that?

6 MR. BROCK: Well, I know she said she watched

7 Channel 4 on Friday morning before court or she

8 overheard the program that was on Channel 4. And I

9 have a clip of the discussion that took place about

10 Johnson & Johnson Baby Powder on Channel 4 on Friday

11 morning.

12 THE COURT: Impressive. What does it say?

13 How long is it?

14 MR. BROCK: It's about three minutes.

15 THE COURT: I will look at that tape before

16 we call juror number three in.

17 MR. BROCK: Thank you.

18 THE COURT: But we'll save oral arguments

19 until after I read the proceedings and after I --

20 MR. BROCK: Sure.

21 THE COURT: -- after I watch the tape.

22 MR. BROCK: Okay.

23 THE COURT: After we all watch the tape. See

24 here we have on page 1406 with regard to juror number

25 three my question. "We can all be filled with doubts

26 and concerns, but we would like to keep you as a

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1 PROCEEDINGS

2 juror, but only if you can assure us once again

3 definitively that you will be fair and square to both

4 sides. That you will keep an open mind. That you

5 will remove those, whatever you heard from --

6 whatever you heard from your thoughts. So you will

7 remove those from your thoughts, whatever you heard.

8 And that you will decide the case only on the

9 evidence, and only on the evidence that you hear in

10 court. And that you will follow the Court's

11 instructions. And do you have any doubt about that?

12 Juror number three: I don't have any doubt that I

13 can do that to the best of my ability."

14 Thank you very much. Is that not unequivocal?

15 I know I said I don't want to hear any oral

16 arguments. Apparently I have changed my mind just

17 with regard to that one statement.

18 MR. BLOCK: You just said, your Honor, is

19 that not unequivocal or did you say is that not

20 unequivocal?

21 THE COURT: It doesn't matter. It comes out

22 to the same thing.

23 MR. HARTLEY: It is unequivocal, your Honor.

24 I think it was unequivocal.

25 THE COURT: It's unequivocal, okay.

26 MR. BROCK: I think -- I think the issue is

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1 PROCEEDINGS

2 to the best of my ability. And that's what she has

3 said in the interview process several times. I would

4 do that to the best of my ability.

5 THE COURT: She says it a little bit stronger

6 the second time, I think. No.

7 MR. BROCK: She also says she was alarmed.

8 She says --

9 THE COURT: Okay. Okay. Now we're going

10 into the argument. I understand.

11 MR. BLOCK: Your Honor, on juror number

12 three, let me just state the plaintiffs' position is

13 that we don't think that any further interviewing of

14 juror number three is needed in light of her

15 responses to the Court's questions that have been on

16 record. In fact, the second time your Honor

17 questioned juror number three, she emphatically said

18 to you, I have put that out of my head. And that's

19 one of the first things that came up in your

20 afternoon questioning of her. At this point to

21 question her three times about this, unless your

22 Honor feels that there is something new to question

23 her about, I don't know how many times that she can

24 unequivocally state that she's put this out of her

25 mind. That she could be fair to both sides. We

26 think at some point it becomes a little bit intrusive

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1 PROCEEDINGS

2 to keep going back to juror number three and asking

3 her the same questions. Of course I defer to your

4 Honor if you think there is anything more to ask. We

5 don't think there is necessarily a reason to question

6 juror number three again, your Honor.

7 THE COURT: Okay. I would like to avoid

8 speaking to her a third time also. Let me give you

9 the citations if I may. First one is Avila versus

10 City of New York, and it's at 73 A.D.3d 444. That's

11 a 2010 case in which the First Department unanimously

12 reversed an \$8 million verdict after the judge,

13 despite consulting both counsel and without objection

14 now, declined to interview a juror to find what

15 caused her to leave the jury room during

16 deliberations and started to get into a physical

17 fight with another juror.

18 MR. BROCK: What did the lawyers say? Just

19 let them work it out?

20 THE COURT: The Court gave the entire jury a

21 modified Allen charge. Do you know what an Allen

22 charge is?

23 MR. BLOCK: Yes.

24 THE COURT: Okay. And told the jury that the

25 heated discussions that caused juror number three,

26 how coincidental is that, to become very upset and a

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1 PROCEEDINGS

2 little bit fearful. Then instructed the jury to

3 deliberate in an adult way, without invective or

4 threats. And sent them back to resume deliberations.

5 And that was after learning that -- I see. There was

6 a problem. Juror number three continued to have an

7 issue. Juror number three wrote, "There is a juror

8 who has been intimidating and threatening. In

9 addition, he has physically threatened another juror

10 and the situation has ended and other jurors

11 intervened. I should not be -- I do not believe I

12 should be intimidated or feel threatened to change my

13 decision. I do not feel comfortable because of this

14 person." And the Court -- And then defense counsel

15 protested and proposed that before replacing juror

16 number three the Court interview all the jurors to

17 determine whether another juror was exhibiting

18 threatening behavior. The Court declined to do that.

19 And thus the reversal.

20 Another important decision which we'll get to

21 with regard to juror number three is People versus

22 Warrington, W-A-R-R-I-N-G-T-O-N, 28 NY3d 1116, and

23 that's a 2016 decision in which "The Court must first

24 and foremost in unequivocal terms expressly state

25 that his or her prior state of mind concerning either

26 the case or either of the parties will not influence

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2 the verdict. The very point of the unequivocal

3 assurance of impartiality is to allow a juror to

4 purge a previous opinion by expressly declaring that

5 he or she will not be influenced. Thus, where a

6 perspective juror unambiguously states, despite

7 pre-existing opinions that might indicate bias, that

8 he or she will decide the case impartially and based

9 on the evidence, the trial court has the discretion

10 to deny the challenge for cause if it determines that

11 the juror's promise to be impartial is credible."

12 Wisholek, W-I-S-H-O-L-E-K, versus Douglas, is

13 another case. That's at 280 AD2d 220, it's a Fourth

14 Department case from 2001 in which the Appellate

15 Division Fourth Department wrote that "The Court

16 properly refused to discharge a sworn juror because

17 first the Court must find that the juror is grossly

18 unqualified and be convinced that the juror's

19 knowledge will prevented that person from rendering

20 an impartial verdict."

21 Then there is Troutman, T-R-O-U-T-M-A-N,

22 versus 957 Nassau Road, LLC at 70 AD3d 672 Second

23 Department 2010 case, discussing CPLR 4106, which

24 provides, "In a civil case four out of five

25 submission of the case to the jury if a seated juror

26 for any reason is unable to perform his or her duty,

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2 the trial court may remove the juror and replace the

3 juror with an alternate juror. There has to be an

4 indication that the juror in question convinced a

5 bias or prejudice towards one of the parties as

6 opposed simply a problem with another juror." It's

7 got to effect the proceedings in a certain way.

8 Let us get juror number five. We'll try to

9 move this along quickly. I understand the concerns.

10 COURT OFFICER: All rise. Juror entering.

11 Just take a seat.

12 THE COURT: Please.

13 JUROR: Hi.

14 THE COURT: Sit down in your regular seat,

15 please. Thank you so very much. Everybody, please

16 be seated. Thank you. I will get a little bit

17 closer to you if I may, because the acoustics in this

18 courtroom are not very good. This way you can hear

19 me if, I may.

20 JUROR: Okay.

21 THE COURT: The officer told me that you had

22 a concern. The officer told me that it was -- it was

23 after 4 o'clock on Friday, it might have been close

24 to 4:30, that you wanted to express to me. And so

25 what I propose to do is for everybody to go into

26 the -- my robing room so that what you say you should

<p style="text-align: right;">Page 1431</p> <p>1 PROCEEDINGS</p> <p>2 feel free in telling us what's going on without</p> <p>3 worrying that anybody in the audience might hear.</p> <p>4 And in addition to that, I will direct that the</p> <p>5 minutes not be available to anyone but the parties</p> <p>6 and to no one else, subject to further court order,</p> <p>7 so that nobody could even get a copy of these minutes</p> <p>8 without the permission of the Court. And that will</p> <p>9 further assure that you could speak confidentially</p> <p>10 and privately to us, okay.</p> <p>11 So, now we're just going to step into the</p> <p>12 back, only the lawyers, and you should wait one</p> <p>13 minute, and the officer will escort you one minute</p> <p>14 when we are ready for you. No worries.</p> <p>15 (Whereupon the proceedings are sealed.)</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p>	<p style="text-align: right;">Page 1433</p> <p>1 PROCEEDINGS</p> <p>2</p> <p>3 (Whereupon this page is intentionally left</p> <p>4 blank.)</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p>
<p style="text-align: right;">Page 1432</p> <p>1 PROCEEDINGS</p> <p>2</p> <p>3 (Whereupon this page is intentionally left</p> <p>4 blank.)</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p>	<p style="text-align: right;">Page 1434</p> <p>1 PROCEEDINGS</p> <p>2</p> <p>3 (Whereupon this page is intentionally left</p> <p>4 blank.)</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p>

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<p>1 (This page intentionally left blank.)</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>1</p> <p>2</p> <p>3</p> <p>4 (This portion intentionally left blank.)</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10 THE COURT: Do you want to show me that tape?</p> <p>11 MR. BROCK: Yes, your Honor. Your Honor, are you</p> <p>12 ready for us to play?</p> <p>13 THE COURT: Yes, please.</p> <p>14 MR. BROCK: So the segment that we will play is a</p> <p>15 segment that aired on channel four, NBC, on Friday morning</p> <p>16 of last week.</p> <p>17 THE COURT: I'm sorry, the time?</p> <p>18 MR. BROCK: I don't have the precise time that this</p> <p>19 segment ran. I just know that it was in that morning</p> <p>20 segment on Friday.</p> <p>21 MR. KURLAND: It is a segment on the Today Show</p> <p>22 which is a program that airs between 7:00 a.m. and 9:00 a.m.</p> <p>23 on channel four. It's the only program that airs during</p> <p>24 that time and it's the only segment from that show that</p> <p>25 mentioned Johnson & Johnson. So we have come to the</p>

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<p>1 conclusion that based on the juror's prior statements, this</p> <p>2 is more likely than not the clip she saw.</p> <p>3 THE COURT: Thank you.</p> <p>4 (Whereupon, a video was played in open court.)</p> <p>5 MR. BROCK: So, your Honor, I think it is evident</p> <p>6 from what the juror number three observed, or heard on</p> <p>7 Friday morning, that she now has information that will not</p> <p>8 be admitted into evidence in this trial.</p> <p>9 There is reference to applying talc in the genital</p> <p>10 area which invokes the issues of ovarian cancer. It's very</p> <p>11 specific about government investigations. The piece on the</p> <p>12 Reuters story that came out in December is presented as</p> <p>13 though this was something that was newly discovered. All of</p> <p>14 this is consistent with the description that she gave of the</p> <p>15 news broadcast where she said that she heard that over</p> <p>16 13,000 people had sued the company and that the FDA is</p> <p>17 getting involved, and other areas of the government. I'm</p> <p>18 not only sure are taking the asbestos that they found or</p> <p>19 taking it more seriously. The findings of asbestos fibers,</p> <p>20 asbestos particles that cause cancer. It's not a piece that</p> <p>21 is -- presents, adequately, both sides of the story. It has</p> <p>22 brief segments of plaintiffs in cases saying that Johnson &</p> <p>23 Johnson is not doing the right thing. It invokes, in that</p> <p>24 way, other lawsuits and other claims, just as the 13,000</p> <p>25 people who were suing does that.</p>		<p>1 THE COURT: When --</p> <p>2 MR. BROCK: I could try.</p> <p>3 THE COURT: When you are finished, I have some</p> <p>4 thoughts.</p> <p>5 MR. BROCK: That's fine.</p> <p>6 She says that what she saw could potentially sway</p> <p>7 her in the direction of the plaintiffs, and she says,</p> <p>8 several times in the morning, and in the afternoon session,</p> <p>9 that she would do my very best not to think about it.</p> <p>10 Now, in the afternoon, you know, after saying, I</p> <p>11 would need some time to put this out of my mind, she made</p> <p>12 the comment that I've forgotten about it. It's out of my</p> <p>13 mind. I'm not considering it. Um, I think she is trying to</p> <p>14 convey that she would try to be fair, but I think that the</p> <p>15 comments that she's made and the presentation that she seen</p> <p>16 on TV, she seen things that are not going to be in evidence</p> <p>17 in this case. She is not going to be able to put those out</p> <p>18 of her mind. It's not some kind of artificial exercise</p> <p>19 where she is thinking about it in the morning saying, maybe</p> <p>20 in time I could put this out of my mind, and three hours</p> <p>21 later she says it's out of my mind. I'm ready to go.</p> <p>22 I just don't think that this juror, based on what</p> <p>23 she has seen and what she has said, should be a juror on</p> <p>24 this case.</p> <p>25 THE COURT: Okay. So I have a couple of thoughts</p>	
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<p>1 When she's asked in an open-ended way in the</p> <p>2 morning how that will -- what -- "How do you think what you</p> <p>3 overheard will affect you, if at all?"</p> <p>4 She did not give an unqualified assurance that she</p> <p>5 could be fair and impartial. She said, "I'm not sure. I</p> <p>6 was a little alarmed. I can wait to make my decision based</p> <p>7 on what I hear, but I don't know if this will -- this may or</p> <p>8 may not sway me a little bit. It wouldn't push me like a</p> <p>9 hundred percent towards one party or the other, but it might</p> <p>10 affect me a little bit."</p> <p>11 And you ask her what -- "How would it affect you 'a</p> <p>12 little bit?"</p> <p>13 "Just that it's in the back of my mind, what I</p> <p>14 heard today."</p> <p>15 And you ask, "Can you take it out of your mind with</p> <p>16 time?"</p> <p>17 "Probably, yes."</p> <p>18 And you ask her, "Why do you think you would need</p> <p>19 some time?"</p> <p>20 And she said, "I would do my best to do that."</p> <p>21 You ask her the question, "Do you think you will</p> <p>22 succeed in striking it from your mind as if it never</p> <p>23 happened?"</p> <p>24 And she said, "I can't say a hundred percent sure</p> <p>25 that I can a hundred percent do that."</p>		<p>1 right off the bat.</p> <p>2 MR. BROCK: Sure.</p> <p>3 THE COURT: I wondered over the weekend whether it</p> <p>4 was really true that she had watched a broadcast that was</p> <p>5 almost five minutes long, and there were a couple of reasons</p> <p>6 why I could have doubted her. One was that she remembered</p> <p>7 only a couple of things from the show, the 13,000, the</p> <p>8 government is going further, and it seems to me that that</p> <p>9 would not be something that would take up the full five</p> <p>10 minutes. That might be a 30 second broadcast, if that were</p> <p>11 the case.</p> <p>12 But now that I've seen the broadcast, I know that</p> <p>13 it's more than 30 seconds, and it's about three minutes, as</p> <p>14 we've heard Counsel say, give or take. I did not time it.</p> <p>15 MR. BROCK: It seemed longer than that to me, but I</p> <p>16 think we had it timed around three minutes.</p> <p>17 MR. BLOCK: We could provide an exact number.</p> <p>18 That's determinable.</p> <p>19 THE COURT: She's closer to being right than wrong.</p> <p>20 And the second thing that I wanted to say is the -- the</p> <p>21 tape-recording itself, I'm not relying on this exclusively,</p> <p>22 but I think because you've mentioned it, I should mention</p> <p>23 it, also. It was arguably a balanced presentation in which</p> <p>24 the Today Show interviewed or recorded the chief executive</p> <p>25 officer of Johnson & Johnson giving J&J's position. It</p>	

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<p>1 might have been from a press conference. I'm not sure. He</p> <p>2 was standing up and speaking, and it seemed a little bit</p> <p>3 rehearsed, so it probably was not an interview, but it shows</p> <p>4 to the jurors that Johnson & Johnson has denied all the</p> <p>5 allegations, and they gave some specificity. And in</p> <p>6 addition to the Today Show's noting that plaintiffs had won</p> <p>7 some cases, it also pointed out that J&J has won some cases.</p> <p>8 So I -- my feeling after watching that video is</p> <p>9 that it was a fair presentation, but it doesn't matter.</p> <p>10 What matters is her -- the juror's ultimate view of what she</p> <p>11 should do with it. And so the next thing that I wanted to</p> <p>12 say, and it's with regard to that, is that I asked her</p> <p>13 whether she could assure the Court that she could strike it</p> <p>14 from her mind, but is that really the standard. The</p> <p>15 standard is, given that everybody has views and thoughts,</p> <p>16 and maybe even biases. The idea is for them to leave their</p> <p>17 views and biases at the courthouse steps when they walk into</p> <p>18 court, and then the issue is whether they could render a</p> <p>19 fair and impartial verdict based only on the evidence and</p> <p>20 not whether they could strike it out of their minds</p> <p>21 completely. But despite that, whether they could give both</p> <p>22 sides a fair trial, and it was a little bit hazy the first</p> <p>23 time I spoke to her, because it's possible that she</p> <p>24 conflated my question about striking the entire TV segment</p> <p>25 from her mind with whether she could be fair, neutral and</p>		<p>1 she doesn't feel that way.</p> <p>2 The second way, possibly, is that she is not sure</p> <p>3 whether she could take it out of her mind, and she is</p> <p>4 discussing that with saying, "I'm not smart enough to make</p> <p>5 the right decision for this case." But I don't agree with</p> <p>6 that second view, because I looked at her and I assessed her</p> <p>7 credibility, and she was sincere. And that's the perineal</p> <p>8 question that jurors have, and which judges have, and that</p> <p>9 is, how do you decide a case? With all the deciding of</p> <p>10 cases that judges do day in and day out, I defy you to find</p> <p>11 a judge who is able to explain fully how the judge came to</p> <p>12 make the decision.</p> <p>13 Judges are tortured by rendering decisions. All</p> <p>14 people are when it comes to something important. And I find</p> <p>15 myself often in a situation where I've heard the evidence in</p> <p>16 the case, um, I have no idea how to rule. It's only after I</p> <p>17 give it some thought that I get a good feeling for how I</p> <p>18 should rule.</p> <p>19 So she is going through the same question. That's</p> <p>20 what she's thinking about, not whether she could strike it</p> <p>21 from her mind. And so having digressed, I go back to the</p> <p>22 transcript:</p> <p>23 "The Court: We think you are," meaning smart</p> <p>24 enough. "So all that, and you've already been selected as a</p> <p>25 juror. We can all be full with doubts and concerns, but we</p>	
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<p>1 impartial, I did not do that. My question was a lot</p> <p>2 clearer. On page -- pages 1405 of the transcript and 1406,</p> <p>3 so it's the part that I read a little bit earlier, so I'll</p> <p>4 begin with this. The first part -- this is juror number</p> <p>5 three -- "The first part" -- this is juror number three.</p> <p>6 "The first part of today it was a little in my mind, but</p> <p>7 it's not in my mind anymore, so I'm not even thinking about</p> <p>8 that."</p> <p>9 "THE COURT: Are you sure --</p> <p>10 "JUROR NUMBER THREE: Yes, actually --</p> <p>11 "THE COURT: -- that you will decide the case fair</p> <p>12 and square to both sides?"</p> <p>13 So she said, yes, actually to the question that she</p> <p>14 is not even thinking about it, but now she hears my full</p> <p>15 question, which is, "Can you decide the case fair and square</p> <p>16 to both sides?"</p> <p>17 And juror number three is now -- is not saying I'm</p> <p>18 going to try to do my best. It's, "I'm going to do my best.</p> <p>19 But it is a lot of information. I don't know if I'm allowed</p> <p>20 to say this, but I don't think I'm smart enough to make the</p> <p>21 right decision for this case."</p> <p>22 There are two ways to view that statement. One is</p> <p>23 that she really is being fair and neutral to both sides</p> <p>24 because she's not coming to an opinion. If she had relied</p> <p>25 on that TV segment, she would have relied on an opinion, but</p>		<p>1 would like to keep you as a juror, but only if you could</p> <p>2 assure us, once again, definitively that you will be fair</p> <p>3 and square to both sides that you will keep an open mind,</p> <p>4 that you will remove those, whatever you heard from your</p> <p>5 thoughts."</p> <p>6 So now I again ask her to remove it from her</p> <p>7 thoughts and that you will decide the case only on the</p> <p>8 evidence, and only on the evidence that you hear in court,</p> <p>9 and that you will follow the Court's instructions, and do</p> <p>10 you have any doubt about that.</p> <p>11 "JUROR NUMBER THREE: I don't have any doubt that I</p> <p>12 can do that to the best of my ability."</p> <p>13 She did not use the word try. She's -- to the best</p> <p>14 of her ability. And I think that that is an unequivocal</p> <p>15 expression that she will do everything, more than what is</p> <p>16 required, that she will decide the case based only on the</p> <p>17 evidence. That she will decided case based only on the</p> <p>18 evidence that she heard in court. That -- that she'll be</p> <p>19 fair and square to both sides. That she will keep an open</p> <p>20 mind, that she will follow the Court's instructions. And</p> <p>21 even that you will remove from your mind whatever you heard</p> <p>22 about the TV show. She was even unequivocal about that.</p> <p>23 And therefore, the motion for -- to remove juror</p> <p>24 number three is denied. It is possible that I might change</p> <p>25 my mind depending on whether juror number three gets back to</p>	

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<p>1 us with further thoughts. I do not plan to ask her any</p> <p>2 further questions. I think that it would be tedious for</p> <p>3 her. It would raise too many questions in her mind. And</p> <p>4 besides, we don't need to because we have a very clear</p> <p>5 record now, and that would be that. But she knows that she</p> <p>6 should talk to us if anything else comes up.</p> <p>7 So we are going to bring the -- oh, you still</p> <p>8 wanted to talk for about ten minutes about that witness.</p> <p>9 Let's do that.</p> <p>10 MR. KURLAND: Your Honor, understanding the Court's</p> <p>11 rulings and the discussion we've had on the record this</p> <p>12 morning, for the sake of the record, Johnson & Johnson takes</p> <p>13 an exception to your ruling and does believe as this time</p> <p>14 that jurors three, four and five should all be removed from</p> <p>15 the case.</p> <p>16 However, we understand the Court's position. We</p> <p>17 understand the remedies the Court has crafted at this point,</p> <p>18 but we just wanted to make that objection clear on the</p> <p>19 record.</p> <p>20 THE COURT: Clear, and the record is preserved.</p> <p>21 You now have a very good record for both sides, and the</p> <p>22 Court's ruling is also very clear. So let us move on,</p> <p>23 please.</p> <p>24 MR. BROCK: Your Honor, we would present, now, our</p> <p>25 motion with regard to Dr. Longo, and my colleague Allison</p>		<p>1 ratio, parallel sides, things like that. And Dr. Longo, we</p> <p>2 expect, based on his prior testimony and his expert reports</p> <p>3 in this case, will testify that that is how he is picking</p> <p>4 out asbestos fibers, by using these counting criteria from</p> <p>5 the regulations.</p> <p>6 The problem, your Honor, is as Dr. Webber testified</p> <p>7 on cross examination, those counting criteria are not the</p> <p>8 definitional portion of the statutes and regulations. Those</p> <p>9 same statutes and regulations defined asbestos as the</p> <p>10 asbestiform varieties of the minerals.</p> <p>11 So there's sort of two processes in place. One is</p> <p>12 defining what asbestos is, and the other is defining what to</p> <p>13 count. And Dr. Longo is conflating those two things to</p> <p>14 mislead the jury and to cover up the fact that he is not</p> <p>15 counting asbestos. He is counting something else.</p> <p>16 And for that reason we think that his findings are</p> <p>17 not scientifically reliable, and his methodology is not</p> <p>18 scientifically reliable.</p> <p>19 A third problem with Dr. Longo is that his testing</p> <p>20 lacks foundation because the samples that he is testing are</p> <p>21 coming from unknown sources. They are coming from plaintiff</p> <p>22 firms, they are coming from eBay, they are coming from the</p> <p>23 internet. They are old, and most of them are opened. And</p> <p>24 he will testify, we expect, that all but four of the bottles</p> <p>25 that he has tested were unsealed. Three bottles were sealed</p>	
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<p>1 Ray will do that.</p> <p>2 MS. RAY: Your Honor, I'll be brief.</p> <p>3 As I'm sure you reviewed our motion in limine, our</p> <p>4 written motion in limine, we are arguing that Dr. Longo</p> <p>5 should be excluded on a number of grounds, and I'll go</p> <p>6 quickly through each one.</p> <p>7 So the first is that we are arguing that his TEM</p> <p>8 methodology cannot identify asbestiform minerals. And as</p> <p>9 such, it is not reliable, not scientifically reliable for</p> <p>10 his opinions about the findings of asbestos in these talcum</p> <p>11 powders.</p> <p>12 So he uses TEM methodology to look and he finds</p> <p>13 minerals and fibers, but he admits that he cannot</p> <p>14 distinguish between asbestiform and non-asbestiform</p> <p>15 varieties of those minerals and fibers. And because the</p> <p>16 issue is asbestos, which requires the asbestiform form of</p> <p>17 these minerals, Dr. Longo's testing is not scientifically</p> <p>18 reliable. And Dr. Longo will not be able to argue that</p> <p>19 there are a lot of scientists who agree with him. He falls</p> <p>20 back to a position that what he is counting is following EPA</p> <p>21 regulations and other regulations similar to the testimony</p> <p>22 that your Honor heard and the jury heard from Dr. Webber,</p> <p>23 which is -- and he is correct in this, that there are</p> <p>24 regulations that specify how to count particular fibers</p> <p>25 based on the shape and morphology of the fibers, the aspect</p>		<p>1 that were obtained from one plaintiff's firm. One of the</p> <p>2 sealed bottles was purchased by them off the shelf. All of</p> <p>3 the sealed bottles are contaminant free, but we are looking</p> <p>4 at a bunch of unsealed bottles that were purchased from</p> <p>5 unknown sources, some of them as long as 70 -- excuse me,</p> <p>6 some of them were made as long as 70 years ago. And we</p> <p>7 don't have any idea what happened to the bottles in the</p> <p>8 interim.</p> <p>9 And as we laid out in our motion, I don't know if</p> <p>10 your Honor took the time to look at some of the internet</p> <p>11 videos out there. The world is a strange place, and people</p> <p>12 do refill these bottles. There are videos out there on how</p> <p>13 to refill the bottles. How to get talc even in bottles that</p> <p>14 haven't had the tops taken off. So we just don't know what</p> <p>15 is going on with these sources. And for that reason, the</p> <p>16 findings are not reliable because the starting point is not</p> <p>17 reliable.</p> <p>18 Finally, I want to argue about two other points.</p> <p>19 One is what I'm going to call extrapolation. So Dr. Longo</p> <p>20 makes findings about particular samples that he takes from</p> <p>21 particular bottles, and then what he do is he multiplies</p> <p>22 those out to get millions and millions and millions of</p> <p>23 fibers based on what he sees in one slide. And there is no</p> <p>24 scientific basis for that kind of statistical extrapolation.</p> <p>25 Dr. Longo is not using the kind of sophisticated</p>	

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<p>1 statistical math that would be required to make a prediction</p> <p>2 about what he is finding from one sample to an entire</p> <p>3 bottle, to an entire line of products over decades and</p> <p>4 decades. And I think that is borne out by his own results.</p> <p>5 He tests a number of bottles and he gets a number of</p> <p>6 different results across those different bottles. If his</p> <p>7 statistical extrapolation were correct, he should be getting</p> <p>8 the same concentrations across the same type of bottles, but</p> <p>9 that's not borne out by his findings.</p> <p>10 Finally, I want to argue about what we are</p> <p>11 collectively referring to as the "below the waist report."</p> <p>12 There is a report that Dr. Longo did that was based off of a</p> <p>13 plaintiff in a different case. Her name was Ms. Ratcliffe.</p> <p>14 And in that case, an investigator, and Dr. Longo's lab, did</p> <p>15 a simulation of the type of powder application that that</p> <p>16 particular plaintiff had alleged that she used. And that</p> <p>17 was a below the waist application. The investigator, it was</p> <p>18 actually a man wearing a swimsuit, pulled his swimsuit open,</p> <p>19 shakes the powder in, squeezes the powder in and then</p> <p>20 recorded the dust in the room during this investigation.</p> <p>21 And we argue that this is in a posit for this case.</p> <p>22 First of all, that is not type application Ms. Olson alleges</p> <p>23 that she used. It's not in a room that matches the types of</p> <p>24 rooms that Ms. Olson alleged that she lived in. The</p> <p>25 particular room in that experiment was made to match the</p>		<p>1 with a different application method, that none of these</p> <p>2 things make the information from the study valuable for the</p> <p>3 question in this case, which was what was Ms. Olson exposed</p> <p>4 to.</p> <p>5 And our understanding is that plaintiffs are not</p> <p>6 asking to play the associated video that was taken of this</p> <p>7 experiment, but to the extent that they are, we would argue</p> <p>8 that not only is that irrelevant, but that is also</p> <p>9 prejudicial. Because the video shows someone wearing a</p> <p>10 respirator in a room with special lighting to show all of</p> <p>11 the dust. And again, this is not someone simulating the</p> <p>12 type of application that Ms. Olson claims that she had.</p> <p>13 So for those reasons, we would ask that Dr. Longo's</p> <p>14 testimony be excluded.</p> <p>15 MR. BLOCK: Good morning, your Honor.</p> <p>16 Dr. Longo has testified in New York, in New York</p> <p>17 City asbestos litigation before about the release of</p> <p>18 asbestos from products. In Judge Mendez's summary judgment</p> <p>19 decision filed in this case on November 14th, 2018, NYSCEF</p> <p>20 Doc. Number 173, Dr. Mendez (sic) discussed Dr. Longo's</p> <p>21 opinion, knowing that Dr. Edward Longo, it's actually</p> <p>22 William Edward Longo, has a doctorate of philosophy and</p> <p>23 material science and engineering. He also studied</p> <p>24 microbiology and chemistry.</p> <p>25 Judge Mendez noted the plaintiffs provided his</p>	
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<p>1 room for that particular plaintiff, but we are in a</p> <p>2 completely different situation here.</p> <p>3 And even more importantly, I think, is the sample</p> <p>4 that was used for that. So the sample that Dr. Longo chose</p> <p>5 for that experiment was M65205-001. And it is strange that</p> <p>6 Dr. Longo picked that sample, because it's 15 times higher,</p> <p>7 in terms of the contamination, recorded by Dr. Longo.</p> <p>8 Again, we are not agreeing this was -- we are not agreeing</p> <p>9 with his numbers, but even according to his own numbers and</p> <p>10 his own conclusions, it was 15 times higher than the median</p> <p>11 positive result for his testing. It was 30 times higher</p> <p>12 than the median results over all of his testing. And it was</p> <p>13 twice as many fibers per gram as all of the other samples</p> <p>14 combined. In other words, it was an outlier. But it wasn't</p> <p>15 just an outlier in terms of the potential contamination. It</p> <p>16 was also an outlier in terms of its history. It was one of</p> <p>17 the oldest bottles. It was actually from the 1940's. And</p> <p>18 Dr. Longo admitted it was 1940's bottle. It was a metal</p> <p>19 bottle with bigger holes in the top. It was a different</p> <p>20 type of bottle than the type that Ms. Olson would have used.</p> <p>21 And Ms. Olson wasn't even alive in the 1940's.</p> <p>22 So this is not a good example of the type of bottle</p> <p>23 that she would have been using when she was dusting herself</p> <p>24 throughout her adult life. And we think that besides that</p> <p>25 this is an outlier sample with a potentially different room,</p>		<p>1 deposition testimony in an asbestos case involving other</p> <p>2 plaintiffs in California. His report dated August 2nd, 2017</p> <p>3 and the "below the waist application" of JJBP's report.</p> <p>4 Dr. Longo performed studies and samples of defendant's</p> <p>5 products and reviewed other reports and studies. Most were</p> <p>6 annexed to the opposition papers and concluded that there is</p> <p>7 asbestos in the talc found in defendant's product.</p> <p>8 Judge Mendez goes on to state Dr. Longo's "below</p> <p>9 the waist application" of JJBP report further quantifies the</p> <p>10 amount of asbestos exposure from the use, and Judge Mendez</p> <p>11 goes on to say that the mean fiber concentration was 2.57</p> <p>12 asbestos fibers per cc in the air samples for the breathing</p> <p>13 area.</p> <p>14 Judge Mendez goes on to say the combined evidence</p> <p>15 from Dr. Longo raised an issue of fact as to causation, and</p> <p>16 so I wanted to mention that.</p> <p>17 Now as to Dr. Longo's methodology, Dr. Longo's</p> <p>18 methodology in identifying asbestos relies upon consensus</p> <p>19 government standards. And also Dr. Longo has published -- I</p> <p>20 have it on the screen here. Dr. Longo is published in the</p> <p>21 peer-reviewed literature on the identification of asbestos</p> <p>22 in materials. He is authored an ASTM standard method that</p> <p>23 includes the identification of asbestos.</p> <p>24 Dr. Longo has been hired by the City of New York</p> <p>25 and State of New York to identify asbestos in the same way</p>	

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1 in which he will identify asbestos in this case.
2 Dr. Longo has published in the peer-reviewed
3 literature regarding the identification --
4 THE COURT: Did anyone seek a Frye hearing? I'm
5 not saying that anyone should have. I'm asking whether
6 anyone --
7 MR. BLOCK: Your Honor, regardless -- do you want
8 an answer to that question, first?
9 MS. RAY: Your Honor, I believe that to the extent
10 that the Court considers his methodology novel, defendants
11 did ask for a Frye hearing, according to their written
12 motion in limine. It's footnote five.
13 THE COURT: Thank you.
14 MR. BLOCK: And Dr. Longo's methodology is not
15 novel. He applied, in preparing the samples, he used
16 Dr. Blount's method from the peer-review literature using
17 heavy liquid separation to prepare the samples for analysis.
18 That is also discussed in the ISO method 22262-2.
19 Dr. Longo used a concentration method, heavy liquid
20 separation method that Johnson & Johnson's own consultants
21 in 1970s said was mandatory in order to identify asbestos in
22 talc.
23 Dr. Longo counted asbestos pursuant to the EPA's
24 protocol. Dr. Longo, in conducting the tests, your Honor,
25 Dr. Longo tested two categories of products. One group were

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1 products that were provided to him by plaintiffs law firms
2 that had obtained them from clients and from the internet,
3 and provided various documentation of where they got the
4 products. So what Dr. Longo did, your Honor, was he tested
5 those products. He found asbestos in those products. He
6 used a methodology of showing the asbestos from the electron
7 microscope. He confirmed the chemistry of the asbestos
8 through standards, through the S analysis. He confirmed the
9 crystalline structure of the asbestos through SAED analysis.
10 He compared the asbestos he found in the Johnson &
11 Johnson products to known standards that allowed Dr. Longo
12 to compare the asbestos he found in the baby powder with
13 National Institute of Standards and Technology, um, samples
14 that show exactly what it's supposed to look like. And your
15 Honor, Dr. Longo will testify that what he counted as
16 asbestos in the Johnson Baby Powder, is asbestos, and it's
17 asbestos under all of the standard methodology for
18 Transmission Electron Microscopy, and he'll talk about those
19 standards, including the EPA.
20 And also, your Honor, under Johnson & Johnson's own
21 definition, all right, you just heard Counsel talk about --
22 they want to talk about how the asbestos grew billions of
23 years ago. Look at their own methodology. If it's greater
24 than three to one, it's a fiber.
25 Dr. Longo was more conservative. He only counted

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1 fibers that were greater than five to one. Johnson &
2 Johnson, in their own all raw material specification,
3 Exhibit 2 in this case, your Honor, look how Johnson &
4 Johnson defines asbestos. Right there. "Asbestos is
5 chrysotile. And it's the fibrous forms of tremolite
6 actinolite and anthophyllite.
7 Dr. Longo found fibrous forms of anthophyllite
8 tremolite and actinolite in Johnson's Baby Powder, which
9 meets even Johnson & Johnson's own standard that they use
10 out of court when they are not defending lawsuits.
11 Dr. Longo's identification of asbestos in the
12 product is also consistent with many standards ISO/ASTM.
13 (Continued on the next page.)
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2 MR. BLOCK: Your Honor -- your Honor, as to
3 the samples, the 30 samples that came from the
4 plaintiffs' law firm, Dr. Longo took steps to confirm
5 that there is no tampering. You know what, your
6 Honor. You can't remove the top off a plastic bottle
7 of Johnson's Baby Powder. You can't remove it
8 without damaging the top. You literally have to take
9 a screwdriver and pry it off, which will show damage
10 to the --
11 THE COURT: I have not done that ever.
12 MR. BLOCK: Right. But here's the key thing,
13 your Honor. It will show the damage. So, Dr. Longo
14 examined the containers and found no such evidence,
15 no such damage. Furthermore, you know what Dr. Longo
16 did? He went and bought some Johnson's Baby Powder
17 off the shelf, and he compared a particle size of the
18 talc in the samples, with the samples he tested, and
19 he found that it was consistent. Also here is a key
20 thing we didn't hear from Johnson & Johnson. Dr.
21 Longo then, he wasn't able to get this before, but he
22 was then able to get samples from Johnson & Johnson
23 that they had preserved and kept in their Johnson &
24 Johnson museum for posterity. He tested their
25 samples. And he posed the scientific question, is
26 his results of their samples consistent with the

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results of the samples that came from the law firm. And the answer is yes. It contains similar concentrations of asbestos. And the asbestos -- the asbestos looks similar and the pictures look similar. The chemistry is the same. Your Honor Dr. Longo's testing is consistent with testing from -- from the peer-reviewed literature that shows tremolite asbestos in talc including from Dr. Blount.

Dr. Longo charted the size of the asbestos he found in samples compared to the NIST known tremolite standard. Compared to Dr. Blount compared to a published article by Campbell.

So, your Honor, the issues that are raised by Johnson & Johnson go to the weight of the evidence. As to the below the waist study -- Well, as to extrapolation, your Honor, he only test a tiny amount of powder from each container. And it is a standard methodology among all TEM labs, even among the defense experts when they find amphibole particles. That you -- that you take what you found and then you are able to say that that is so many fibers per gram and that goes to cross examination. They will raise the issue well, you actually only tested this much. I will lay the foundation with Dr. Longo as to determining fibers per gram based upon testing a

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extent they claim there is some issue that the testing applied below the waist, the key point, your Honor, is what's getting up in the air. There are issues on that which will go to the weight of the evidence as well.

Also Dr. Longo, the container he used had similar concentrations of asbestos as a study in the peer-reviewed literature that found similar results with respect to another brand of talcum powder that also used Italian talc. This container that Dr. Longo tested used Italian talc. We do not plan to show the video from the examination.

MS. RAY: Your Honor, if I may briefly respond.

THE COURT: Yes.

MS. RAY: I will not belabor the arguments that I already made. But I do want to just stress the exposure below the waist study used one tin. It used one tin from the 1940s that came from a plaintiff's firm. And why did they chose one tin from 1940s? Ms. Olson wasn't using tins from the 1940s. She wasn't using that kind of product. Yet they chose the one tin from the 1940s that had 15 times higher than their medium positive finding. It's blatant cherry picking. For that reason we

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small amount, this TEM small amount.

As to below the waist study, your Honor, applying Johnson's Baby Powder in the crotch area, okay, that's one of the common uses. It's marketed as such to prevent chafing. And a key point here is Dr. Longo -- that test followed a peer-review methodology. It occurred in what's called an exposure simulation chamber. Dr. Longo published it in the peer-review literature about the testing of asbestos-containing products in that exposure simulation chamber. The person in the chamber is always protected. Here Dr. Longo was testing a product that was known to contain asbestos based upon his testing. And how much was used in the study? Four grams. How much is Johnson & Johnson in their historical documents say is normally applied when talcum powder is applied to the body? About four grams. So, the amount used in the below the waist studies is consistent with documents where Johnson & Johnson did usage studies of customers, and they said about four grams, five, in fact sometimes six grams, sometimes eight grams. Dr. Longo's testing on that was conservative.

Mrs. Olson, her use of it was all over her body and closer to her breathing zone. So, to the

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argue that the exposure study from the below the waist study is not applicable to this case.

THE COURT: Well --

MR. BLOCK: Can I respond to that, your Honor? Your Honor, the container had a similar concentration to asbestos as a study in the peer-reviewed literature. Dr. Longo will compare results of that study. That container used Italian talc, okay. Whether it was a 40s or 50s container, and Dr. Longo will talk about that, that container used Italian talc. Donna Olson was exposed to Italian talc, Johnson's Baby Power.

MS. RAY: Your Honor, he's trying to say a peer-reviewed literature about a competitor's product is providing information about Italian talc from the 1940s for Ms. Olson.

MR. BLOCK: No, that's not true.

THE COURT: Folks. Folks. Thank you everyone. I think the Court understands. Jury will be told that, assuming that this witness is qualified as an expert witness, that when a case involves a matter of science or art or requires a special skill or special knowledge, which most people don't have, but some qualified witnesses do, those are expert witnesses, and they are permitted to state their

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2 opinions over which they have obtained knowledge.
3 And that the jurors can accept those opinions or they
4 can reject those opinions or they can accept those
5 opinions that they wish to accept and reject those
6 opinions they, after careful consideration of all the
7 evidence, including cross examination, that the
8 opinions are -- are not persuasive. And everything
9 that I've heard so far is -- is argument about the
10 witness' qualifications. I want to hear what the
11 witness' qualifications are.
12 In the event that anybody asks me to find
13 that the witness is an expert witness, if you want me
14 to give an instruction to the jury immediately upon
15 my finding, I'm happy to do so. As often is the
16 style in New York State Court, but it's not the
17 style, as I understand it, in Federal Court. We just
18 continue. But everything else is a matter for the
19 jury. It goes to the weight of the evidence, and
20 it's not something that the Court can exclude a
21 witness even for hearing the witness.
22 And so, let us bring -- The motion is denied.
23 The doctor can testify. We'll take it from there.
24 Let's bring down the citizens in the correct order.
25 More news. Juror number three told Officer
26 Huie that her grandmother's on her death bed sadly

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2 and at some point she will have to attend the
3 funeral. We don't know when. The grandmother, when
4 that -- obviously we don't know when that will take
5 place. But I'm just going to tell her that we'll
6 accommodate her.
7 There also is an issue with one of the other
8 jurors. I don't think I know which one or I forgot
9 which one, but there is a juror who needs to take off
10 part of Friday.
11 COURT OFFICER: Yes, Friday afternoon.
12 THE COURT: This Friday afternoon.
13 COURT OFFICER: This Friday afternoon.
14 MR. BLOCK: We're off Friday afternoon. We
15 discussed it.
16 THE COURT: Yes. Perfect. Okay. Let's
17 bring them down.
18 COURT OFFICER: All rise. Jury entering.
19 (Whereupon the jury panel entered the
20 courtroom.)
21 THE COURT: Thank you so much. Please be
22 seated everyone. We hope that you had a wonderful
23 weekend. We will continue with the trial in just a
24 moment. Let me tell you that we have shuffled the
25 jurors. Perhaps the jurors will be in a position,
26 all of you, that you could better hear the witness

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2 now that we have done so, because the acoustics in
3 this courtroom are very poor. Otherwise these are
4 things that happen from time to time in a trial.
5 You're not to wonder about it or worry about it.
6 Don't even think about it.
7 The next thing is that a juror told Officer
8 Huie last week about a problem or something that the
9 juror has to do I think this Friday afternoon.
10 JUROR: That was me, your Honor.
11 THE COURT: We will be off this Friday
12 afternoon. So we're able to accommodate you. We're
13 happy to do that, sir.
14 JUROR: Thank you, sir.
15 THE COURT: Thank you. And another juror has
16 an issue about the health of a relative, and
17 unfortunately that the juror might have to miss at
18 least a little bit of court because of the relative's
19 bad health. And we will accommodate that juror. We
20 will accommodate all of you. You are our first
21 priority.
22 Next witness.
23 MR. BLOCK: Yes, your Honor. The plaintiff
24 calls Dr. William Longo.
25 COURT CLERK: Raise your right hand.
26 W I L L I A M L O N G P h D., after having been duly

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1 Direct-Longo-Block
2 sworn by the court clerk, was examined and testified as
3 follows:
4 COURT CLERK: Please be seated.
5 THE WITNESS: Thank you.
6 COURT CLERK: In a loud, clear voice state
7 your full name and address for the Court.
8 THE WITNESS: William Longo, 3945 Lakefield
9 Court, Suwanee, Georgia, 30024.
10 COURT CLERK: Thank you.
11 THE COURT: You may inquire.
12 DIRECT EXAMINATION
13 BY MR. BLOCK:
14 Q. Dr. Longo, good morning.
15 A. Good morning.
16 Q. Can you introduce yourself to the jury and
17 tell the jury what area of science you specialize in?
18 A. My name is Bill Longo. I live in Cumming,
19 Georgia which is just one of the many suburbs that line
20 Atlanta. My area is material science and engineering
21 coupled with industrial hygiene.
22 Q. All right. So, what is material science?
23 What is that scientific field?
24 A. Quite simply it's the study of materials that
25 are defined usually about five different ways. You have
26 your metals or metallurgy, polymers or plastics, ceramics

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2 or minerals, in this case we're dealing with asbestos and
3 talc, then you have what are composites, where they will
4 put --
5 THE COURT: We need you to speak up, sir.
6 THE WITNESS: Sorry, your Honor.
7 THE COURT: It's not your fault. It's the
8 acoustics in the courtroom are poor.
9 THE WITNESS: I tend to get low at times.
10 I'll try my best.
11 THE COURT: Thank you.
12 A. So you might mix a polymer with say an
13 aluminum material. I saw ad recently for new types of
14 standalone bathtubs that are using this kind of composite.
15 And the last part is what I spend a lot of time in
16 graduate school is biomaterials. Things implanted into
17 the body, such as an artificial knee or interocular lens
18 if you get a cataract. As material scientists, we learn
19 all the different characteristics of the materials, its
20 strengths, its weaknesses for all of these different
21 types. Where you can use them. Where you don't use them.
22 And then how to develop new materials. If you're old as
23 me, you can remember when soda cans or beer cans came in a
24 steel can with a seam down the side and had a top and
25 bottom that you could actually see. It was a material
26 scientist that came up with an aluminum copper alloyed

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2 that made that lighter, faster, less energy to make. The
3 ceramic heat shields on the Space Shuttle, material
4 scientists developed that.
5 THE COURT: Material scientists -- I'm sorry?
6 THE WITNESS: Developed -- The heat shields
7 on the Space Shuttle, that was a new type of ceramic.
8 All your semiconductor advances getting smaller and
9 new exotic materials is all material scientists.
10 The last part is how to understand how a
11 material, when it's all made, if something goes
12 wrong, what happened. So, we do a lot of forensic
13 engineering like okay. Say this scale, somehow there
14 is some corrosion starting on it, that's happening
15 over and over. A material scientist could go in and
16 say okay. Did you have the right material there.
17 Some acid got on it, so on and so forth.
18 Material scientist are usually involved in
19 things like, is the go between all the different
20 engineering groups. Your civil engineering, your
21 mechanical engineer. They are putting together to
22 replace a bridge. They will get a material scientist
23 in there, like okay, what's the best concrete. The
24 new type of metal alloys. What kind of coatings.
25 So, I like to say material scientists know a
26 little bit about a lot of stuff in the engineering

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2 field. When it comes to what material to use, they
3 usually go to material science and engineering.
4 Q. Can you tell us about your educational back-
5 ground starting from college?
6 A. Received a Bachelor's of science in
7 microbiology. I went on to and applied and got into
8 graduate school in material science and engineering. I
9 received a master's of science and material science in
10 engineering and stayed in that department and received my
11 Ph.D. or doctorate in material science and engineering.
12 Graduating finally in 1983 I believe it was.
13 Q. And at some point did you get involved in
14 analyzing materials under the microscope?
15 A. Yes. Literally my whole career, but starting
16 in graduate school. When our professor would get
17 consulting projects, where materials had failed, plus in
18 graduate school material science in engineering, you learn
19 how to run and analyze stuff with all the scientific
20 acronyms that scientists like. So, everything from
21 optical microscopy to transmission electron microscopy,
22 the scanning electron microscopy, gas chromatographs, mass
23 specs, you name it, we were able to use it in our research
24 when you're getting your Ph.D. to use how to understand
25 strengths, weaknesses. So, as a nerd you love all these
26 different tools, we call them tools, that analyze stuff.

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2 Q. Here we have the initials MAS. Can you tell
3 us about your company and when you started it and how it
4 got started?
5 A. It stands for Materials Analytical Services,
6 but everybody calls it MAS. We opened the doors of MAS in
7 February of 1988 with two employees. Over the years it
8 grew to about a hundred employees with analytical
9 laboratories in Atlanta, Raleigh, North Carolina, Phoenix,
10 San Jose and we had offices also in Los Angeles and
11 Washington, D.C. As it turns out, all those labs, they
12 specialize in semiconductors. So, we diversified in that
13 in 2006. Now we have just the Suwanee laboratory. It's
14 20,000 square feet and we have 41 employees.
15 Q. Can you tell the jury what type of science
16 professionals you have working for you at Material
17 Analytical Services?
18 A. We have other material scientists like
19 myself. We also have an inorganic chemist, organic
20 chemist, physicists, optical microscopists that specialize
21 just in that, transmission electron microscopists,
22 scanning electron microscopists, geologist, mineralogist,
23 biologist, microbiologist. I don't want to leave anybody
24 out. I think that pretty much covers it.
25 Q. When did you first get involved with testing
26 materials to determine if they contain asbestos, and if

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2 so, what kind of asbestos was in the materials?
3 A. When I started my first little company in
4 Gainesville Florida called -- My God it's been so long --
5 Micro Laboratories I believe it is.
6 Q. Okay. What year was that when you first
7 started analyzing materials for asbestos?
8 A. Let's see. I graduated in I think it was
9 October of 1983. And I started that company in around
10 September of 1983.
11 Q. All right. Let me show you what's been
12 marked as Plaintiffs' Exhibit 310-A. Dr. Longo, is that
13 the most recent version of your CV?
14 A. (Examining). Yes, sir, it is.
15 MR. BLOCK: Plaintiff moves Exhibit 310-A
16 into evidence.
17 MR. BROCK: No objection.
18 THE COURT: It's admitted.
19 (Whereupon Plaintiffs' Exhibit 310-A was
20 deemed marked received in evidence as of this date.)
21 Q. So, Dr. Longo, how long then have you been
22 testing materials for the presence of asbestos?
23 A. Commercially since approximately 1984 we
24 were, 1985 we were one of the first analytical
25 laboratories in the country that was analyzing asbestos on
26 air filters by transmission electron microscopy. So, over

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2 32 --
3 Q. Thirty-five years now.
4 A. Thirty-five years now. God, time flies.
5 Q. Dr. Longo, can you tell the jury about any
6 work that you've done with the EPA on the issue of
7 asbestos?
8 A. Initially I was one of the scientists that
9 was on -- EPA called it their blue ribbon panel for
10 developing methods for analyzing asbestos back in the late
11 1980s, early 1990s. And a method is really nothing more
12 than a recipe where you start at A and when you get to Z
13 you have a result. Methods are important, because you
14 want to standardize them. If Lab A is analyzing asbestos
15 using a method, and Lab B analyzes asbestos using some
16 different method, Lab A and Lab B can't compare their
17 results. So, you want a standardized method. So, if Lab
18 A uses a method that has been standardized and B uses a
19 method and Lab C does, we all understand what the results
20 are.
21 So, we were doing -- we were putting together
22 methods to -- for EPA to analyze asbestos in settled dust
23 samples in buildings that contain asbestos products.
24 Q. And over what time period were you involved
25 in this EPA peer-review group for the asbestos engineering
26 program?

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2 A. Well, that was a different group. And that
3 was four scientists that met with the EPA in Cincinnati.
4 And again those were in the -- I think the early 1990s.
5 We would go every six months and look what EPA was doing
6 in their research on asbestos issues. So, we would try to
7 give them guidance, what we see outside of EPA and what
8 was needed, and try to put them in directions that was
9 good for the deal with the asbestos problem at the time.
10 We would look over their research, it would be peer
11 reviews for their research. We would make recommendations
12 on where they needed to go for the next stage. We did
13 that ever six months for about five years.
14 Q. And how many people were asked to do that by
15 the EPA?
16 A. There were four of us.
17 Q. How about the AIHA, what is that group and
18 what work have you done with that group relating to
19 asbestos?
20 A. American Industrial Hygiene Association. And
21 it is a group that does a couple of things. It -- In
22 order to become a certified industrial hygienist, you have
23 to go through the AIHA and take their test and meet their
24 qualifications. They constantly are providing an avenue
25 for new research to get industrial hygienists more
26 involved. And really an industrial hygienist is somebody

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2 who can go into an industrial site and have the knowledge
3 and the whereabouts to say all right. I think this could
4 be a problem. First one is anticipation of a problem.
5 I'm going to use an extreme case. Walk in and it's a
6 manufacturer making carburetor cleaner. And Carburetor
7 cleaner uses solvents. The solvents have a particular
8 smell. So, say he walks in or she walks in and says I can
9 smell organic compounds. There must be a leak somewhere
10 in here. So, the second part of an industrial hygienist
11 is to take measurements. To figure out yes, there is a
12 leak. Then they must be able to remediate that leak.
13 Okay. You got to change this gasket. You got to have
14 more ventilation in this hood to get the fumes out. Then
15 you train so it doesn't happen again. So, that's what an
16 industrial hygienist does.
17 Q. Okay. And are you certified as an industrial
18 hygienist?
19 A. No, sir, I'm not.
20 Q. Have you had certified industrial hygienists
21 work for you at MAS?
22 A. Yes, and they still do.
23 Q. Okay. And have you corroborated with
24 certified industrial hygienists in publishing articles in
25 the peer-review literature?
26 A. Yes, a number of my articles have been

<p style="text-align: right;">Page 1483</p> <p>1 Direct-Longo-Block 2 published in industrial hygiene journals. I have been 3 asked to teach at the AIHA conferences a year to help 4 certified industrial hygienists understand how to use the 5 electron microscope to solve industrial hygiene problems 6 including asbestos. Industrial hygienists are like 7 attorneys in that you have to take continuing education 8 courses and get your points. Certified industrial 9 hygienists also have to take continuing education courses 10 at these conferences. I've been invited to teach there at 11 times. Even though I'm a material scientist, I've spent a 12 lot of my career involved in industrial hygiene, in 13 hygiene issues with asbestos exposure. 14 (Continue on the next page.) 15 16 17 18 19 20 21 22 23 24 25 26</p>	<p style="text-align: right;">Page 1485</p> <p>Dr. Longo - Plaintiff - Direct (Mr. Block)</p> <p>1 developing methods for testing asbestos. 2 Q And did you -- were you involved in authoring or 3 creating a standard for the testing of asbestos that was adopted 4 by the ASTM? 5 A Yes. I was in charge of putting the protocol together. 6 It was the D-2205 Committee. And it was called -- we had 7 developed for EPA, but now I was -- have to say it's the entire 8 entity protocol. Yes, I didn't realize what it was going to 9 take to get in the subcommittee, 125 scientists, and other 10 interested parties, to come to an agreement on a 30-page 11 document. 12 Q Did you ultimately do that? 13 A It took six years. I swore I would never do another 14 one, but it is the most peer-reviewed and scrutinized method 15 that anybody developed. Besides your committee it goes to the 16 full committee, so you may have 2,000 scientists looking at it. 17 And any one negative vote can send it back to the drawing board. 18 And then it goes out to the entire committee, the entire ASTM, 19 which is 40,000 people. So they are very rigorous on their peer 20 review. 21 Q So I want to ask about some groups or entities that 22 you've done consulting work for on issues related to asbestos. 23 And since we are in New York City, I want to start with New York 24 City. 25 What type of work have you been hired to do for New</p>
<p>Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1484</p> <p>1 Q And we'll get into it more, but have you taken 2 industrial hygiene measurements of asbestos in the air? 3 A I have in. 4 Q Have you published articles in the peer-reviewed 5 literature about that? 6 A Yes, I have. 7 Q What is the ASTM, and what sort of work have you done 8 with the ASTM on asbestos over the years? 9 A ASTM is the American Society for Testing Materials. 10 It's now known as the International Society of Testing 11 Materials. It is the largest standards organization for making 12 -- for generating methods in the world. 13 So ASTM generates standard methods. Again, these are 14 the recipes that do something and make it a standard so 15 everybody else will do it. They make standards from everything 16 from -- if you are a manufacturing cabinets that go in a 17 kitchen, there is an ASTM standard for how many times that door 18 should open and close before something goes wrong. 19 There are standards for concrete. It is used in every 20 building in the country now, where the architect or the engineer 21 will say, you have to use ASTM standard -- and I don't know the 22 concrete standard, but I'll makeup the number, you know, E5432, 23 and then the person building the building should know to use 24 that. 25 My area was in the -- a committee that specifically was</p>	<p>Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1486</p> <p>1 York City related to asbestos? 2 A New York City hired me -- that's been a while -- to 3 help them figure out in a lot of their buildings who 4 manufactured the asbestos products in the building. Say, for 5 example, if a high-rise had asbestos-containing fireproofing in 6 it that had maybe been put in there ten, 15, 20 years before 7 that, it doesn't have any labels on it anymore. So they wanted 8 to determine if we could take those samples and reverse engineer 9 forensically, determine the ingredients in them. Say, for 10 example, if it's a fireproofing that has chrysotile asbestos, 11 ten percent, 35 percent vermiculite, Libby, Montana vermiculite, 12 and gypsum, with no starch. Well only one manufacturer in the 13 world made that that's W.R. Grace. The product is MANA code 3. 14 Getting their formulations of what they said they put 15 it in and comparing for all the formulations of the known 16 manufacturers, we were able to come up with a way to tell the 17 difference between that and say fire code V, type D, made by 18 U.S. Gypsum, which had ten percent chrysotile, 35 percent 19 vermiculite, 55 percent gypsum, and one percent starch to get 20 past the MANA Code W.R. Grace patent. 21 Q So is this litigation for New York City was suing the 22 manufacturer, the manufacturers of the products that were in 23 place in certain parts of New York City buildings? 24 A Yes. The asbestos fireproofing, the acoustical 25 plaster, the surface texture materials. And over time we were</p>

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1 able to essentially determine that every one of these
2 manufacturers had a fingerprint that distinguished it from one
3 to another to another, who made basically the exact same thing,
4 because they are all engineered to do the same thing.
5 Q So New York City, they had to hire an expert to
6 determine whether the material in the buildings contained
7 asbestos and also to determine, based upon the other
8 ingredients, who made that asbestos, and you did that work for
9 New York City?

10 A Yes, I didn't do the first part. After they determined
11 it was asbestos, then they would send it to our lab and we would
12 reverse engineer it and determine who made it. And sometimes we
13 could get down to the actual plant it was made in and what years
14 it was made in, because they would change the formulations
15 slightly over time.

16 Q Did you do some sampling yourself in New York City at
17 large buildings, back when they were standing, including the
18 Twin Towers, World Trade Center?

19 A Yes. The Twin Towers or the Port Authority of New York
20 and New Jersey, we were doing the exact same thing for them.
21 And we, myself and an industrial hygienist, geologist that
22 worked for me, went to the World Trade Center to sample both
23 samples from inside the elevator shaft that had 25 percent US
24 mineral sound shield, and the first 31 floors, somewhat had been
25 abated of Tower One before they stopped using sprayed on

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1 asbestos fireproofing.

2 Q So this asbestos, it's not in the elevators; right?

3 A No.

4 Q So how would you when -- you went up to the upper
5 floors and you were sampling for the asbestos, how would you
6 sample for it?

7 A I get that little hatch on the top of the elevator, of
8 course with Port Authority's people, and get on top of the
9 elevator, because it was inside the actual shafts, and then move
10 the elevator and you could look up. It was pretty daunting.

11 Q So you would get up there over the elevator shaft, the
12 elevator stopped, take a sample and then analyze it in your lab?

13 A Correct.

14 Q So how about the State of New York. Did you do similar
15 work for the State of New York?

16 A We did for the State of New York, as well as other
17 states, um, school districts, public buildings from around the
18 country, once we kind of cracked the forensic code.

19 Q How about some of these government agencies like the
20 Center for Disease Control, the National Institutes of Health,
21 have you done work with those federal government agencies on
22 asbestos?

23 A The Center for Disease Control and National Institutes
24 of Health did have to do with asbestos.

25 Q Tell us what work you did related to other material

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1 scientific --
2 A It's microscopy issues. Center for Disease Control
3 wanted us to image the samples they had of Ebola virus, because
4 we had one of the better high resolution scanning electron
5 microscopes. The National Institutes of Health, it was a
6 contract that we received. They wanted to image, and this was
7 back in the early days of the AIDS epidemic. And they wanted to
8 look to see if human sperm -- actually, the AIDS virus was
9 attached to it and it was as a mode of transportation for
10 infection.

11 We also did work with similar groups and had to do with
12 looking at microvilli in the intestines for these types of
13 supplement products when people need to get a lot of calories.
14 And they were looking at how they artificially caused the
15 microvilli that absorbs the nutrients to kind of expand to make
16 it easier for nutrients to get in there. And they would
17 volunteers to come in to take samples of the microvilli in the
18 small intestines. I would not do that.

19 Q How about our space program NASA? Have you done
20 scientific work for them?

21 A Yes. We -- our lab in Raleigh had some instruments
22 that were able to drill microscopic holes, very precisely, using
23 a focused ion beam in their x-ray telescope that they shot up a
24 few years ago. It needed to have an area perforated with
25 micrometer sized holes in a perfect pattern to collect the

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1 signal that was coming in for the x-ray telescope. So that was
2 kind of a fun project.

3 Q And is this a corporation, Dow?

4 A Dow. We were asked in one of the bankruptcies for one
5 of the asbestos manufacturers, Dow, I believe it was -- no, it
6 was Union Carbide. Union Carbide asked us to identify --
7 because we were the referee lab for people who said your product
8 is in my building -- and they had -- we had to be the referee
9 lab for all these different manufacturers who were making
10 asbestos-containing materials. And Dow was just a typical
11 consultant that -- outside of asbestos where we do lots of other
12 things. I can't remember exactly and probably can't talk about
13 it.

14 Q Okay.

15 How about the Air Force? Any scientific work for the
16 air force or armed service?

17 A The air force was to do some microsurgery on some very
18 specialized chips, and the chips had redundancy in them where
19 they were going in case one area failed. And one part of the
20 redundancy on the chip was bad. So they wanted to bypass it
21 like little -- put jumper cables on it. So we had developed a
22 technique in our Raleigh lab where we could subber (phonetic)
23 the connection. So basically you are pulling the plug out and
24 you want to put it in a different plug. And then we were -- we
25 developed a way to take a platinum gas and polymerize it right

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1 where we wanted the jumper cable on a microscopic level so the
2 circuit could be completed right around it. So that was another
3 interesting project.

4 Q Can you tell the jury about certifications that your
5 lab has, and just generally what is the importance of
6 laboratories being certified?

7 A So we are certified for asbestos analysis, both the
8 American Industrial Hygiene Association, as well as what is
9 known as the National Voluntary Laboratory Accreditation
10 Program, which is essentially run by the National Institutes of
11 Standards and Technology. Probably Dr. Webber talked a lot
12 about it because he was one of the assessors.

13 What it does is, when you say you are following certain
14 methods and people are hiring you and they say okay, you are
15 going to use the AHERA method, the Asbestos Hazard Emergency
16 Response Act, and you are analyzing air samples by TEM and you
17 say yes, I'm following this, all the rules and the method, well,
18 you better be.

19 So they have assessors come in once a year, once every
20 two years and look over your program, look at your reports, make
21 sure when you say I'm following AHERA, TEM analysis for air
22 samples that you are following the rules.

23 They come in and make sure the lab technicians are the
24 technicians that are doing the work and actually identify
25 asbestos. They bring in standards. They look through your QC.

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1 It's usually about a week they are in your laboratory. They'll
2 tell you ahead of time and you get everything set up. The
3 American Industrial Hygiene Association, same thing for -- we
4 are certified for counting asbestos on air filters, and then a
5 whole bunch of organic chemistry and inorganic chemistry.

6 We are also ISO certified, International Standards
7 Organization Certification for Quality Control. And all these
8 analysis. And also we are certified by ISO to certify other
9 folks for the types of testing they are doing for BOC testing.

10 And then we have an FDA lab number. And that is the most
11 interesting audits of all of them.

12 Q How do you get an FDA lab number? How do you get that
13 certification?

14 A It's not a certification.

15 Q Okay. So what is it?

16 A You have to put into FDA all your quality control
17 experience, everything you are doing. And they look through all
18 the paperwork and then they give you a number. But what's
19 different about FDA than the rest of them, do you -- when you
20 have an FDA audit, you know when you find out?

21 Q When is that?

22 A When they are sitting in your lobby. The call I got AT
23 8:15 last November and they said, Bill, there's two FDA agents
24 sitting in the lobby ready for your audit. It is the most
25 comprehensive audit I've ever seen of anybody. I mean every

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1 drawer is looked at. They even looked in the trash cans to see
2 if the analysts were throwing any data away. It was extensive,
3 so.

4 Q Over the years when you've obtained these
5 certifications and these inspectors come to your lab and looked
6 at the way you analyzed asbestos, how has your lab fared with
7 that.

8 A Well, we've always kept or accreditation. The last
9 NVLAP, we didn't have one check mark for doing something.

10 Usually they'll find something. Well, you need to do it this
11 way, or, you know, that -- or the logo is not right that you are
12 using, type thing. So we've been successful for the last 28
13 years on our audits.

14 Q Dr. Longo, we already covered this, right, this is the
15 ASTM asbestos standard that you talked to the jury about?

16 A Yeah. That is the one I was in charge of getting
17 through the D-5755, measuring the potential for a building where
18 it has asbestos products to cause dust to get on the surface,
19 and if you own that building and you have a program to deal with
20 that, with you want to know how much contamination that's on
21 that surface and that -- of asbestos, and that would tell you
22 how you have to deal with that.

23 Q Did that standard include how you identify something as
24 asbestos?

25 A Yes. The standards will tell you how to collect the

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1 sample. In this case it's called a micro vacuum, where it's an
2 air cassette set up like a vacuum where you go over -- you map
3 out an area (indicating). Say this is five by five centimeters,
4 five by five by five, and then you vacuum it. It tells you how
5 to prepare the sample. And when you get into the transmission
6 electron microscope, it's very precise to tell you what you call
7 asbestos fibers and bundles and what you do not call asbestos
8 fibers and bundles. They have strict county rules and
9 identification procedures.

10 Q And Dr. Longo, approximately how many asbestos products
11 have you tested over the years, or samples have you tested for
12 the presence of asbestos?

13 A We are probably close to 400,000 since we've opened the
14 door 30 years ago.

15 Q And can you tell the jury about the history, you've
16 talked about some of your work outside of litigation. Can you
17 tell the jury about the history of your company and performing
18 testing for asbestos products in litigation, including for New
19 York State and the other cities and states, and including
20 plaintiffs and defendants?

21 A Yes. The product that we called the Product ID. We
22 after we've developed, I'll called it again, cracked the code
23 and reversed engineering, we were hired by the state of Hawaii,
24 the State of Texas, the City of Los Angeles, the City of San
25 Francisco, of course the City of New York, the State of New

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1 York, the Port Authority, Chicago School Systems, Utah, and then
2 various large buildings and school systems around the country.
3 I've also been hired by plaintiffs to do this, and I've
4 done quite a bit of it. But we've also been hired by defendants
5 where I've tested their products and do not feel that the
6 products caused significant exposure.

7 Q In fact, Dr. Longo, is it true that you have been an
8 expert for the defendant in a case against my law firm?

9 A Yes. You weren't quite as nice to me then as you are
10 today.

11 Q Okay. Did one my law partners actually take your
12 deposition in a conference room where the court reporter wrote
13 things down to challenge your opinions in that case where you
14 were testifying for the defendant?

15 A Yes, sir. And that happens a lot because I've worked
16 for law firms on behalf of -- they are plaintiffs, but if we
17 test products that defendants make and we don't feel like they
18 cause exposure, and if my clients have them in a lawsuit, I'm
19 sitting on the other side. And usually they are pretty good
20 about it.

21 Q All right.

22 And the case where -- in a case where you were an
23 expert for a defendant opposite my law firm, did that involve
24 Scotts fertilizer?

25 A It did. It involved their turf builder fertilizer,

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1 product is poured into spreaders and spread out in the grass.
2 It's not a product, and it's encapsulated. It's not a product
3 that was designed to put directly onto the body as a fine
4 powder. The asbestos is vermic -- is encapsulated, and there
5 was still some there, not to the degree it was. When that
6 product is used, you can't detect it. It wasn't designed to
7 pour onto the body every day for years and years and years.
8 It's completely two different things.

9 Q Dr. Longo, have you been hired by other companies in
10 asbestos litigation to consult with them, such as General
11 Electric or others?

12 A Yes, General Electric made hair dryers, the hand-held
13 hair dryers. There was some indication as some folks felt and
14 did some tests of could it release asbestos during its use.
15 We've tested a number of them where we set it up and blow it for
16 hours and hours on a mannequin's head and take air samples and
17 never have been able to detect asbestos. We've been haired by
18 Westinghouse in current cases and a number of different
19 companies.

20 Q Okay. So in terms of your payment, do you have an
21 hourly rate that you charge as an expert in litigation?

22 A I do.

23 Q What is that hourly rate?

24 A My company would send a bill for \$550 an hour.

25 Q So when the money is paid to the company, does Material

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1 where from approximately 1968, or so, to 1979, they used a
2 vermiculite that is known as Libby, Montana vermiculite. And
3 the starting ore is heavily contaminated with tremolite
4 asbestos.

5 Libby, Montana is now a Superfund site because of all
6 the contamination of processing in mining that ore, that
7 vermiculite. And it's well-known to have tremolite that's now
8 been reclassified as winchite, richterite, tremolite,
9 actinolite, which is all a type of tremolite.

10 Q So in that case, is that fertilizer product really the
11 same or different than a baby powder product?

12 A Well, two things happen here, it's the fertilizer --

13 THE COURT: Just a moment, please.

14 Q Go ahead Dr. Longo.

15 THE COURT: Thank you.

16 A The fertilizer is advertised as a time-release. So
17 they take the vermiculite and they have to clean it all off and
18 get the vines out because they are coating it with a polymer, so
19 urea formaldehyde polymer. So all the particles have a coding
20 on it, and the way it works is once it gets into the ground, the
21 bacteria start feeding on it and releasing nitrogen, so that is
22 the time-release part. So their process, they wanted to know,
23 did it reduce the amount of asbestos in it going through and
24 encapsulating, and the answer was yes.

25 How it's different from baby powder is that this

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1 Analytical Services have significant expenses that go along with
2 that business?

3 A I would like it to be paid to me directly, but we have
4 40-some employees, we have a 20,000 square foot building. Um,
5 you know, employees have health insurance, Workman's Comp, the
6 electric bill, the every day feeding of a 20,000 square foot
7 facility with 41 employees, and the equipment upkeep, plus new
8 equipment, so, no, it doesn't all go to me.

9 Q From what you told us, it sounds like you have some
10 highly educated and specialized employees to pay; is that right?

11 A Yes. We have other Ph.Ds, but they are all
12 specialized, you know, various degrees, master's level geology
13 mineralogists, microbiologists, and on and on, plus the support
14 staff.

15 Q So if you look at the total amount of money that's been
16 paid to your business, Material Analytical Services, over 30
17 plus years, how much are we talking about?

18 A Um, well, I overestimated, but I said it one time on
19 the record, so I'll stick with it. For plaintiffs, in 30 years
20 we've averaged about a million dollars a year on behalf of
21 plaintiffs, for everything, not just testimony, but all the
22 testing, et cetera. So, we celebrated our 30th anniversary last
23 year, so approximately \$30 million paid to MAS over those 30
24 years.

25 Q And as you, I think, indicated to the jury, have you

Dr. Longo - Plaintiff - Direct (Mr. Block)

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1 also been paid over the years by City and State governments, by
2 government agencies and by defendants in asbestos litigation?
3 A Yes. That would include all that property damage work
4 that we did, all the analytical work for all the states and
5 cities. And everything from churches to you name it. And also
6 we charged the exact same amount when we work on behalf of
7 defendants. We don't change anything.

8 Q All right.

9 So let's talk about some of this price see state of the
10 art equipment that Material Analytical Services uses. What is
11 this picture?

12 A This is a transmission electron microscope. That's one
13 of ours. We have three exactly like that.

14 Q And can you give us a basic explanation of what a
15 transmission electron microscope is in the way hopefully we
16 could understand?

17 A Sure. It's easy.

18 Q Okay.

19 A Probably everybody --

20 Q Let's see how it goes?

21 A I'll do my best. It's easy. Everybody has looked at a
22 -- probably seen a light microscope, you seen in your doctor's
23 office, biology class or wherever. You are using light to
24 magnify what you are interested in. And so light usually is
25 coming up from the bottom of the microscope. You got a glass

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1 slide there. You are imaging it. And then as it goes through
2 the glass slide, it takes the colors, in what you are looking
3 at, and trans -- then it goes through glass lenses to magnify
4 them. So, a very good tool. We have a lot of them. Polarized
5 light.

6 The first thing we ever do when we get a kind of a who
7 done it project when something is going wrong and we are trying
8 to figure it out when we get the sample, we look at it under the
9 optical microscope.

10 Now, the light is really a vibrational wave. It's like
11 this is one wave, and I'm going to exaggerate (indicating). My
12 ability to magnify things under an optical microscope depends on
13 how big or small I'm using to look at it.

14 So if my wavelength of light is this big (indicating),
15 and I want to look at a fibrous thing that is this big
16 (indicating), I can't see it because it's this is too big. It
17 can't resolve it, we call it.

18 On the other hand --

19 THE COURT: Hold on --

20 THE WITNESS: I'm sorry, your Honor.

21 THE COURT: Would you like to explain the witness's
22 width of hands and what he was holding?

23 THE WITNESS: Okay.

24 THE COURT: Or would you like to do that?

25 THE WITNESS: I'll do that, your Honor.

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1 THE COURT: You have stretched your arms about two
2 feet wide and then a moment later you held a cup.

3 MR. BLOCK: First of all, thank you your Honor.

4 THE WITNESS: That's a good point.

5 Q Dr. Longo, if you are doing something with your hands
6 that you think is important for the record to reflect, then just
7 let us know. If it's something that you are just using to, you
8 know, prove a general point, we understand that as well, but so
9 you could go ahead, Dr. Longo.

10 A All right. So say my wavelength of light is two feet
11 (indicating). It's not, of course. It's in microns. So I can
12 only resolve or see things in the optical microscope that are
13 typically bigger than this wavelength of light. That's how I
14 see it.

15 Now, if I pick up this cup (indicating) and the cup is
16 maybe four inches across, and my wavelength of light is two
17 feet, I can't see that. On the other hand, the transmission
18 electron microscope, if go to the very top of that.

19 Q Here (indicating)?

20 A No.

21 Q (Indicating)?

22 A Right there. That is a cable coming in with the
23 voltage. That microscope runs on 120,000 volts. It goes down
24 to a tungsten filament, just like in lights, but better, and
25 because of that voltage, it causes electrons to start spewing

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1 out of end of the tip. An electron, if my wavelength of light
2 is two feet (indicating), an electron on the tip of my finger,
3 all things being equal, I still couldn't see it. It's minutely
4 small. And so when those electrons come out, then they have a
5 charge difference. You get electrons start going down to this
6 other charge, and in that is electromagnetic lenses, uses it to
7 squeeze the electrons together almost like in a beam. And if I
8 have your little pointer, I think it would be easier.

9 (Whereupon, the pointer was handed to the witness.)

10 Q There is a laser if you press the red part. It should
11 show up there.

12 A Okay. So -- not really. Never mind.

13 MR. BROCK: It's turning red.

14 A It's not showing up on the screen.

15 MR. BLOCK: Your Honor, may Dr. Longo step off the
16 witness stand to show a few things about the transmission
17 electron microscope?

18 THE COURT: Yes, go ahead.

19 THE WITNESS: Thank you, your Honor.

20 (Whereupon, the witness stepped down from the
21 witness stand.)

22 A So the electrons are generated up here, and because of
23 this charge difference right here (indicating), it literally
24 shot down this column. And then there's lenses here
25 (indicating), electromagnetic lenses that start squeezing that

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1 beam into a fine, almost essentially a fine beam, about maybe
2 the size of a pencil. As it gets here (indicating), this is
3 where the sample goes in. This is the transmission part of the
4 transmission electron microscope. And so it gets here, goes
5 through the sample, and if you have a fiber, a microscopic fiber
6 in this beam, electrons -- less electrons go through here
7 (indicating), on the top and around the fiber than by it. So
8 it's imaging it. Just sort of like an x-ray.
9 You take an x-ray, the bone absorbs some of the x-ray,
10 so it's reversed. It looks lighter. And then the sides of it
11 are darker. And you are doing the same thing here. Once it
12 gets out of here, you have to then spread that beam out, so you
13 have electromagnetic lenses, again, three of them, pushing it
14 out so that the image now is big enough so you could see it. If
15 you pull that off, you'll see it on the fluorescent screen.
16 (Continued on the next page.)
17
18
19
20
21
22
23
24
25

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1 Direct-Longo-Block
2 A. Because you're using electrons, you can look
3 at much smaller fibers and microscopic particles. In our
4 Raleigh lab, we had one of these that -- a higher model
5 than this that you can look at magnifications up to three
6 to 6 million times. You could actually see the atom
7 lattices in some samples. So, very powerful tool. Also
8 it allows you to positively identify asbestos. This tool
9 on the side is known as EDS. You can do microchemistry on
10 the fibers. And because you're taking a beam and you're
11 going through a crystal structure, it gives you what's
12 known as defraction patterns. As the crystals cause the
13 electron beam to scatter in particular directions,
14 depending on how the crystals orientate. We can analyze
15 asbestos and positively identify it. So, a very good
16 tool.
17 Q. All right. Thank you, Dr. Longo. The jury
18 has heard a little bit about the TEM grids, the openings
19 where you're looking at the material.
20 A. Yes.
21 Q. Can you give us a sense of the size of a TEM
22 grid that you're looking at when you use a TEM microscope?
23 A. It's the sample holder. In the TEM grid you
24 have this almost 10,000 pound microscope that is almost
25 ten feet tall. The size of the sample you can put in
26 there typically is a three millimeter TEM grid that holds

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1 Direct-Longo-Block
2 it. So, about that big (gesturing).
3 Q. Dr. Longo, is this another picture of a TEM
4 microscope at Material Analytical Services at your lab?
5 A. That is a brand new model. You can see that
6 it looks a lot different.
7 Q. Right. So we have computer screens. And how
8 much is a piece of equipment like this cost?
9 A. With everything you see there, that would
10 cost \$750,000.
11 Q. And what is, I guess, new and different about
12 this TEM versus the one you were telling the jury about?
13 A. If you go back to the previous one, you see
14 how big it is.
15 Q. Yes.
16 A. Also you'll see right in the middle where the
17 cover is, yeah, that cover is the fluorescent screen that
18 you look at and you also have binoculars that you can pull
19 in and make another ten times magnification. To either
20 side of that, to the left and the right you'll see these
21 round things. No. Too far. Too far. There you go.
22 Q. Yes.
23 A. Those are the turn to move the sample back
24 and forth. So, when you're looking at it, and you're
25 scanning the sample, you're constantly doing this. Now if
26 you go back to the other one, smaller, there is no knobs.

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1 Direct-Longo-Block
2 You can run it by a joy stick to move the sample. Or you
3 can do a rollerball or you can -- And the only screens are
4 the computer screens. You don't look. So you can sit and
5 look at your images and do what you need to do.
6 The other thing about it is you don't have to
7 be in the dark. You can look at it in that kind of light.
8 Go back to the other one. That's a fluorescent screen on
9 the bottom of that.
10 Q. Here (indicating)?
11 A. See where -- Right in the middle. If you
12 pull that cover plate off, there is a florescent screen.
13 For me it has to be dark in order to really see that
14 florescent screen.
15 Q. Now, how long have -- how long have
16 transmission electron microscopes been around to be used
17 by scientists or industry?
18 A. The first commercial model was sold by RCA.
19 That's a 1950 RCA transmission electron microscope.
20 That's their second generation. So, the first generation
21 came out in about 1947.
22 Q. Where did you get this picture of this
23 microscope from? Was it the late 1940s?
24 A. That's actually in our conference room.
25 Q. So you have this?
26 A. Yeah. Yes, I do. If you go in the

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1 Direct-Longo-Block
2 conference room, it sits in the corner, because it's
3 incredibly interesting.
4 Q. And in the early 1950s were there labs doing
5 transmission electron microscopy work for industry in the
6 United States?
7 A. There was.
8 Q. And was there -- was there one here in the
9 State of New York?
10 A. A very famous one. It's still a company.
11 Dr. Ernest Fullam. He used that microscope. That was his
12 microscope. And I first ran across some of his early work
13 when he was working for Lower Lard, for the Kent Micronite
14 cigarettes that they sold from 1951 to 1955 that had
15 crocidolite in the filter. One of the first filtered
16 cigarettes. He had actually taken and analyzed the smoke
17 on behalf of them and still had the original glass plates
18 with the silver nitrite on them. That's how they took the
19 pictures. We were able to develop the pictures. Later,
20 when we got involved, we found exactly what Dr. Ernest
21 Fullam found in 1954.
22 Q. In the early 1950s the tobacco company
23 Lorillard Tobacco Company actually hired Fulham Labs in
24 New York to look at their product that contained asbestos
25 under the transmission electron microscope back then?
26 A. Well, they already knew it had asbestos in

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1 Direct-Longo-Block
2 it.
3 Q. Right.
4 A. He was looking at the smoke.
5 THE COURT: So, is that a yes?
6 THE WITNESS: That's a yes.
7 Q. More specifically did Fulham Labs use the
8 transmission electron microscope to look at whether
9 asbestos was released in the cigarette smoke?
10 A. That's correct.
11 Q. And did you end up doing your own research on
12 that topic and actually publishing on that in the peer-
13 reviewed literature?
14 A. Yes, we did.
15 Q. So tell us about, we have seen pictures of
16 the polarized light microscope the smaller microscope. I
17 want to ask you about the one we haven't seen or talked
18 much about, the scanning electron microscope. Do you have
19 that equipment in your lab as well and what does it do?
20 A. Yes, sir. That's one of our scanning
21 electron microscopes. That, instead of transmission
22 electron microscopy, where the electron beam is going
23 through the sample like an X-ray, the scanning electron
24 microscope scans over the surface and gives you almost a
25 three dimensional look at very high magnifications what
26 the surface looks like. It's not transmitting through.

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1 Direct-Longo-Block
2 It's going over the surface. And that's a picture of a
3 tremolite fiber on the screen. And you can almost see, it
4 gives you almost a three dimensional look. We don't use
5 it that much for asbestos. It's a lot of other things.
6 It's a very important tool for characterizing microscopic
7 features on just about anything you can put in there.
8 Q. Okay. I now want to ask you about some key
9 concepts in terms of testing asbestos and talc, okay, Dr.
10 Longo?
11 A. Yes, sir.
12 Q. And did you test Johnson's Baby Powder to
13 determine if it contained asbestos?
14 A. I did.
15 Q. And in testing Johnson's Baby Powder to
16 determine if it contained asbestos, did you apply the same
17 test methodologies or the same standards that you used in
18 testing asbestos for over 30 years?
19 A. We did.
20 Q. And in identifying whether there was asbestos
21 in Johnson's Baby Powder, did you identify asbestos in the
22 same way that you did over the years performing other
23 testing, including for the City of New York and State of
24 New York?
25 A. Yes. The same types of methods that are the
26 standard methods.

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1 Direct-Longo-Block
2 Q. Okay. So in terms of some key concepts, I
3 want to ask you about these two and ask you if we have
4 here today, did you ship up to me a few scales here to
5 demonstrate the concepts of limit of detection and the
6 sensitivity of a method?
7 A. I did.
8 MR. BLOCK: Your Honor, may I move forward --
9 THE COURT: Yes.
10 MR. BLOCK: -- to the table? Okay.
11 Q. So, let's see if we can put this over on this
12 table.
13 MR. BLOCK: May Dr. Longo get off the witness
14 stand, your Honor?
15 THE COURT: To go to you?
16 MR. BLOCK: Yes. This is a scale, and it's a
17 demonstrative that Dr. Longo brought to talk about
18 limit of detection and sensitivity of an analytical
19 tool.
20 THE COURT: Yes, the doctor may.
21 MR. BLOCK: Okay.
22 Q. So, Dr. Longo, if you could step forward and
23 we will let's see if we can actually set it here. Okay.
24 So, Dr. Longo, it's a little difficult to see. We'll put
25 it in the center here. And, Dr. Longo, you brought a
26 scale here. And the scale shows zero. That it is

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1 Direct-Longo-Block
2 detecting zero weight on the scale. And for the record is
3 there anything on the scale?
4 A. Is there anything up my sleeve? No, there is
5 nothing on the scale.
6 Q. All right.
7 A. So, it's at zero. And limit of detection or
8 sensitivity is how much has to be there before we can find
9 it. So, if you're analyzing water for lead, the
10 concentration has to get about .001 percent before you can
11 see it. Meaning the method is sensitive now to a certain
12 concentration. That's all you can say is we found it at
13 this concentration. If the method has poor sensitivity,
14 then there has to be more and more and more before you can
15 say it's present. With microscopes it's the same thing,
16 limit of detection. So, to demonstrate, since we have a
17 bathroom scale, okay. I want to see if I can detect, you
18 know, two paperclips. No.
19 Q. All right. So, Dr. Longo --
20 A. Can I detect a box? No. So, the sensitivity
21 of the method is not designed to measure this small stuff.
22 Q. But, Dr. Longo, the scale says zero. Does
23 that mean that there is zero paperclips on the scale?
24 A. No. So, now we can, you know, 200 paperclips
25 we can see it. So that's important to understand. When
26 somebody says I didn't detect it or there was nothing in

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1 Direct-Longo-Block
2 there, you can't say there was nothing in there or you
3 can't say there was something in there still. You can
4 only say is when I measured.
5 Q. Okay. So now it says zero?
6 A. If I'm looking around and look over here and
7 go well, there might be some paperclips on there, but my
8 method is not sensitive enough to tell me if I have a box.
9 Q. Dr. Longo, let me ask you one question here.
10 So, there is a box of paperclips on the scale that we all
11 can see. So, is that a finding of that this scale is free
12 of paperclips?
13 A. No. All you can say is I'm not measuring
14 anything on the scale. It may not be sensitive enough to
15 measure one box of paperclips.
16 Q. So, is this a non detect, a nondetectable --
17 is the result here nondetectable?
18 A. Correct. If we were analyzing for asbestos
19 using the standard methods now in talc and we don't see
20 anything, we say it's not detectable to a certain
21 detection limit. So, if I want to make my method more
22 sensitive or have a better detection limit, I prepare it
23 in a way or use a better tool that can measure it. So,
24 remember we couldn't detect three paperweights, I mean,
25 three paperclips not paperweights. If we go over to a
26 simple -- I don't know if I could get this one down. So,

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1 Direct-Longo-Block
2 if I go to a jeweler's scale that can measure down to a
3 hundredths of a gram and I put one paperweight on it, I
4 can detect it .37 grams is one paperweight. I'm using a
5 better tool. It's my analytical sensitivity and limit of
6 detection now tells me one paperweight. I keep saying
7 paperweight. One paperclip.
8 Q. So, right now -- Was this scale more
9 sensitive?
10 A. It's more sensitive for smaller weights.
11 Q. And does this scale that is in grams, does it
12 have a lower limit of detection?
13 A. One hundredths of a gram. So, a box of
14 paperclips, say it right for the first time, is
15 42.37 grams including the cardboard.
16 Q. And we know that one box of paperclips is
17 below the limit of detection for this bathroom scale, but
18 it's able to be detected by this more sensitive scale?
19 A. Correct. That's really in a nutshell what
20 limit of detection is. How sensitive can I make it to see
21 what the lowest concentration I can see.
22 Q. Thank you, Dr. Longo. Let me, now in looking
23 at testing talc for the presence of asbestos, what is the
24 third point here? We have a misspelling, analytical tool.
25 My bad. Analytical tool plus preparation method. What
26 does that mean? Why is it important in looking at the

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1 Direct-Longo-Block
2 testing of talc for the presence of asbestos to look at
3 both the analytical tool that is used and the preparation
4 method for the talc before it's analyzed?
5 A. Because these tools, XRD, X-ray defraction,
6 polarized light microscopy and transmission electro
7 microscopy hasn't changed that much in the actual -- the
8 way it's used and for what you're doing with it. So,
9 these methods, these tools are okay. But to make it more
10 sensitive, 'cause you're not really changing the
11 transmission electron microscope to make it more super
12 duper that you can get down to analytical sensitivity,
13 it's all the preparation method. How I prepare the sample
14 allows you to make it more sensitive or less sensitive
15 depending on what you do to the sample. So, it's all
16 about the preparation method.
17 Q. All right. So, I would like to start with
18 the preparation method. What preparation method did you
19 use when you tested Johnson's Baby Powder to see if it
20 contained asbestos?
21 A. When we first started, we used transmission
22 electron microscopy, but we used what is known as a heavy
23 density liquid separation. We really have two ingredients
24 in this material that we're interested in, talc, which
25 makes up about most of it, and then if there is amphibole
26 asbestos present, tremolite series or anthophyllite

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1 Direct-Longo-Block

2 series, there is going to be a very small percentage. All
3 that talc covers everything up. So, for TEM, if you get
4 too many top plates, you can't see through it. So somehow
5 we decided, and it's an old technique, of removing the
6 talc as much as possible, which then allows us to get more
7 material, make it more sensitive just for the asbestos.
8 So, it's called heavy liquid separation.

9 Q. Now this scientific concept of using a heavy
10 liquid or a liquid of a certain density to separate
11 different materials, how old is that scientific concept?

12 A. Hundreds of years. It's not really heavy
13 liquid density. But people who started panning for gold.
14 You're using water. That density is one gram per cubic
15 centimeter. But the gold has a higher density than the
16 rock and dirt. So, that's when they are swirling it
17 around and then pouring it. They are keeping the rock,
18 dirt and clay in suspension so they can pour it off. Then
19 they look what's left, and occasionally there is some gold
20 dust or particles.

21 Q. So, in that situation people are trying to
22 find gold, and they want to get the dirt and other
23 material out of the way so they have a better chance of
24 actually finding what they are looking for?

25 A. Correct. Those densities are so different
26 it's easy to do. Talc and amphibole asbestos is a little

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1 Direct-Longo-Block

2 different.

3 Q. What is this demonstrative? We have a
4 bottle. It looks like it has a clear liquid in it and
5 there is some white balls and blue.

6 A. So this is a bottle -- This is one of the --
7 I get invited occasionally to go to middle school students
8 and elementary students.

9 MR. BROCK: Your Honor, I think the question
10 is what is it.

11 A. This is a bottle with water and these are
12 polyethylene essentially round pieces.

13 Q. And is that something you've used just in
14 courtrooms or something you've used to educate people in
15 other context as well?

16 A. This would be the first time I used it in a
17 courtroom.

18 Q. Okay. When do you usually use it for?

19 A. Usually when I go to spend an hour in science
20 classes in middle school and elementary. And I get when
21 they are working on things like understanding matter and
22 density. And get the concept that you can have something
23 of the exact same size, but the matter of it is that
24 it's more dense. So, I would bring this in and say these
25 are identical particles, but one is denser than the other.
26 Then watch how it separates. That's density separation.

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1 Direct-Longo-Block

2 So, what we wanted to do is separate out the
3 talc and separate out any potential amphibole asbestos at
4 the bottom. Remove this. Then we can make it more
5 sensitive.

6 Q. All right. So when you started thinking
7 about looking at Johnson's Baby Powder to determine if it
8 had asbestos in it, how did you approach it
9 scientifically?

10 A. Well, it was clear to us that we needed to do
11 a liquid density separation that's been done in the past.
12 And searched the literature. And found this paper
13 published in 1991, "Amphibole Content of Cosmetic and
14 Pharmaceutical Talc" by Dr. Blount. In here she used
15 heavy liquid density separation to make the polarized
16 light microscopy method more sensitive to amphiboles. She
17 separated out the talc and was able to analyze it and
18 found -- made the method more efficient and was able to
19 detect amphibole asbestos by removing the majority of the
20 talc. This was her classic publication.

21 Q. All right. We have an animation that you
22 helped put together on this heavy liquid separation
23 method?

24 A. Correct.

25 Q. So, the talc is in what's this thing?

26 A. It's a little centrifuge tube that can hold

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1 Direct-Longo-Block

2 -- we put approximately anywhere from 30 to a hundred
3 milligrams, and then we disburse it in a heavy liquid
4 density. The density is between the talc, what that
5 density is, in between what the amphibole asbestos is.

6 Q. All right. Then it went into a centrifuge?

7 A. Correct. And the talc goes to the top, it
8 floats and the more dense particles, which are the
9 amphiboles asbestos particles, fibers goes to the bottom
10 while it's spun at a high RPI. I think it's 8,000 that we
11 use. Then you take the tip off with the blue.

12 Q. You actually -- How do you do that?

13 A. We actually flash freeze it in liquid
14 nitrogen, which is minus 256 degrees Fahrenheit. And then
15 cleave the bottom off. And then harvest that, resuspend
16 it and filter it and the top part we discard.

17 Q. Okay. So in addition -- in addition to
18 separating out the talc particles that float to the top,
19 is there any other benefit in terms of how much of the
20 talc sample you can look at by using this method?

21 A. Yes, there is. For example, using this
22 method we have been able to get our analyticals, our
23 detection limit. Detection limit means how many asbestos
24 fibers has to be in the talc before we can find one.
25 Detection limit is finding one fiber. We have a detection
26 limit now that is approaching 3,500 fibers or bundles of

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1 Direct-Longo-Block
2 asbestos in the talc before we can find one. Not doing
3 this method means you have to dilute the sample like crazy
4 so you don't get overloading. A typical detection limit
5 for all the methods is approximately anywhere from 10
6 million to 12 million fibers in bundles per gram.
7 Q. Just so we understand this. Is there only so
8 much? You said you can only load a certain amount of
9 material to analyze under the transmission electron
10 microscope, is that right?
11 A. Correct.
12 Q. What is that approximate amount?
13 A. For doing this type of analysis, you can't
14 really load more onto the filter with the talc about 150
15 nanograms.
16 Q. And by doing it this way, are you loading it
17 with the part that sank to the bottom, where the
18 amphiboles asbestos is most likely to be?
19 A. Yes.
20 Q. Does that allow you then to essentially look
21 at more material that's relevant to the issue of finding
22 amphibole asbestos?
23 A. Correct. We can't increase the analytical
24 sensitive by a million times. It doesn't get rid of all
25 the talc.
26 Q. And we'll see some pictures about that later.

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1 Direct-Longo-Block
2 A. Correct. So, if I have these boxes, say
3 these are talc particles, TEM, you know you want something
4 like this, where they are not on top of each other. If we
5 don't use this, we can't get to the sensitivities. If we
6 tried to use the same amount of talc, we're going to get
7 it all built up. I'm stacking these. This is what almost
8 every image would look like. The electron beam can't make
9 it through all these talc plates. You have to have it
10 spread out.
11 Q. Dr. Longo, just for the record, were you
12 demonstrating that if you don't use a heavy liquid density
13 separation method, that the talc can obscure the amphibole
14 asbestos so you can't see it?
15 A. If you use the same amount that you're using
16 for heavy liquid density and didn't do heavy liquid
17 density and just filtered that same amount of talc, you
18 could never analyze the sample. You would have to discard
19 it.
20 Q. Now, is this heavy liquid density separation
21 method that you described to the jury, and that is in Dr.
22 Blount's published article, is it talked about in any
23 standard methods?
24 A. It's specifically in the ISO method 22262-2,
25 Section 16 specifically uses heavy density liquid
26 separation for the analysis of talc by either polarized

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1 Direct-Longo-Block
2 light microscope, by scanning electron microscope or
3 transmission electron microscope. So, there is an
4 international standard for this method.
5 Q. Let me show you an image of Exhibit 27 that
6 is in evidence and the jury saw with Dr. Webber. Have you
7 become aware of any of Johnson & Johnson consultants using
8 heavy liquid density separation technique or a
9 concentration technique back in the early 1970s to detect
10 asbestos in talc?
11 A. Yes. Again it's a method that has been
12 around for a long time.
13 Q. When you started analyzing Johnson's Baby
14 Powder for the presence of asbestos and read Dr. Blount's
15 article in the published literature, did you know Johnson
16 & Johnson's consultants had been doing work on this in the
17 1970s?
18 MR. BROCK: Objection. Leading.
19 THE COURT: All right. Sustain.
20 Q. When did you first find out and how did you
21 find out that Dr. Reynolds from Dartmouth College had been
22 doing the concentration technique in analyzing talc for
23 asbestos back in the early 1970s?
24 A. It wasn't until we started receiving these
25 kind of documents that are produced through the courts
26 that showed that in the early 1970s they were looking and

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1 Direct-Longo-Block
2 trying the heavy liquid density method for the analysis of
3 asbestos in their cosmetic talcs.
4 Q. Here in 1974 the jury has seen Dr. Reynolds
5 from Dartmouth College told Johnson & Johnson that a
6 concentration technique is mandatory because it brings the
7 amphiboles into a reasonable concentration range for
8 optical or other methods of analysis. Do you agree with
9 that statement?
10 A. I do agree with that statement.
11 Q. And why do you agree with Dr. Reynolds that
12 using a concentration technique such as heavy liquid
13 separation is really mandatory in analyzing talc for the
14 presence of asbestos?
15 A. Because if you don't use this technique, the
16 chances of you detecting reasonable amounts of
17 concentration of asbestos present is almost zero.
18 Q. And have you, in this document, have you seen
19 Dr. Reynolds actually show Johnson & Johnson this image
20 and how does this image I guess compares to what you've
21 been doing in testing Johnson's Baby Powder for the
22 presence of asbestos?
23 A. Besides the rubber plug, it's identical. You
24 can see the heavy minerals at the bottom. It's a
25 centrifuging tube at the top. How they are separating it
26 is they run it with this rubber plug and they pull it out

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1 Direct-Longo-Block
2 to remove the talc. We do it a little differently. We
3 think it's more efficient to do the freezing.
4 Q. Then take it just from the bottom?
5 A. When I first saw this I went, there is the
6 method we're including.
7 Q. Okay. And just to be clear, is this a
8 document that was ever published in the peer-reviewed
9 literature?
10 A. No. This was internal studies that was done.
11 THE COURT: It's just about 1 o'clock.
12 MR. BLOCK: This is fine, your Honor.
13 THE COURT: Very well. Let us take a break
14 now for lunch. Keep an open mind. Don't discuss the
15 case. Don't perform any internet searches of any
16 kind. You know the rules. See you at 2:15. Thank
17 you so much. We'll start promptly at 2:15.
18 COURT OFFICER: All rise. Jury exiting.
19 (Whereupon the jury panel departed the
20 courtroom.)
21 THE COURT: Enjoy your lunch, doctor.
22 THE WITNESS: Thank you, your Honor.
23 (Whereupon a luncheon recess was taken.)
24 (Continue on the next page.)
25
26

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1 THE COURT OFFICER: All rise. Jury entering.
2 (Whereupon, the jurors entered the courtroom and
3 were properly seated in the jury box.)
4 THE COURT: Please be seated. Good afternoon,
5 everyone.
6 MR. BLOCK: Good afternoon.
7 Q Dr. Longo, we were just talking about what
8 Dr. Reynolds, from Dartmouth College, had told Johnson & Johnson
9 in 1974 about the concentration technique for identifying
10 asbestos in talc. Do you recall that?
11 A Yes, sir.
12 Q So let me also show you, on the screen, Exhibit 27A.
13 (Whereupon, a demonstrative aid was shown on the
14 screen.)
15 Q The jury has seen in evidence, and this is a document
16 the jury has seen, which was written by a Dr. Robert Rolle of
17 Johnson & Johnson. I want to ask you about what Dr. Rolle from
18 Johnson & Johnson says here. They are talking about a method by
19 a Dr. Pooley from Cardiff University. And it says, Dr. Pooley,
20 it says "The second technique developed also by Dr. Pooley
21 involves pre-concentration of tremolite in talc followed by
22 x-ray defraction analysis." Do you see that?
23 A Yes, sir.
24 Q And as someone who has done analyses on talc and used
25 the concentration technique what is your understanding of what

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1525

1 is being discussed there?
2 A They are doing a separation technique to concentrate
3 the tremolite from the talc. That is exactly what the heavy
4 liquid density separation does.
5 Q And it says, this technique has not been written up
6 yet, but evidently when applied to Vermont talc, point zero five
7 percent of tremolite type is found.
8 And then the person from Johnson & Johnson says, "The
9 limitation of this method is that it may be too sensitive." Do
10 you see that?
11 A Yes.
12 Q And as someone who has spent your career identifying
13 asbestos in materials, is a technique being too sensitive
14 something that is a problem or a strength of an analytical
15 technique?
16 A It would never be a problem.
17 Q Okay?
18 A There's no such thing in the analytical world being too
19 sensitive.
20 Q So if you are looking for asbestos in talc, do you want
21 the method that you use to be as sensitive as possible?
22 A You do. It's -- it's just not heard of. Being too
23 sensitive means I'm finding so much, it's off the scale of the
24 instrument. Then you just dilute the sample.
25 Q And using --

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1526

1 A There is no downside of being too sensitive in the
2 analytical records.
3 MR. BROCK: Objection, your Honor.
4 THE COURT: Sustained. You are answering more than
5 the questin has required. Please listen, sir.
6 THE WITNESS: Sorry, your Honor.
7 Q In terms of the language you were looking at earlier,
8 do you want the limit of detection on any method to be as low as
9 possible when you are looking for asbestos in talc?
10 A That is correct.
11 Q Just as a scientist who has analyzed talcs for
12 asbestos, can you think of any scientific reason where you would
13 conclude that a method was too sensitive in its ability to find
14 asbestos in talc?
15 A No. There is no scientific reason, unless you didn't
16 want to see it.
17 Q So here we have four types of asbestos on the screen,
18 and three have been circled. And how, if at all, is this
19 significant for the heavy liquid separation preparation method
20 used to identify asbestos in talc?
21 A The heavy liquid method is sensitive in that it is very
22 good for tremolite and actinolite because the density of that is
23 higher, much higher than the talc, so you could easily separate
24 that.
25 Anthophyllite, certain types of the anthophyllite, what

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1 we call solid solution series if the anthophyllite asbestos has
2 no iron, it has relatively the same density as talc. So you
3 won't see anthophyllite without iron.

4 As anthophyllite has certain -- certain anthophyllite
5 asbestos will have more and more iron. It is sensitive to that.
6 So the only anthophyllite we typically see is anthophyllite that
7 has an extra element, iron, in it.

8 Q Okay.

9 So with the chrysotile, what is the weight of
10 chrysotile as compared to the heavy liquid that you are using to
11 separate the talc from the asbestos?

12 A The density of chrysotile is 2.56 grams per cubic
13 centimeter.

14 The density of talc is approximately seven, 2.7 grams
15 per cubic centimeter. And then everything else we are looking
16 at, the density is 3.0.

17 Q So the density of the liquid that is separating the two
18 is what?

19 A Is 2.85. So chrysotile in talc will float in that
20 liquid. Anthophyllite will stay with the talc, unless it has
21 iron.

22 Q How about the tremolite and actinolite?

23 A That is also found present at the detection limit we
24 need --

25 Q Is that because tremolite and actinolite weigh more

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1528

1 than chrysotile, so they'll float to the bottom of the heavy
2 liquid?

3 A It has a higher density.

4 Q And Dr. Longo, as we get in here testing of Johnson
5 baby powder for the presence of asbestos, what standards or
6 counting rules did you use to determine what you were
7 identifying as asbestos?

8 A We use one of the what I'll call the standard
9 transmission electron microscopy methods or protocols for the
10 analysis of asbestos fibers and bundles.

11 Q What is that?

12 A The protocol calls for -- the EPA has the same protocol
13 that the rest of them do for this. It states that in order to
14 be asbestos, the geometrical, or length or width, has to be
15 greater, the overall length of the asbestos fiber bundle, has to
16 be greater than or equal to point five micrometers. And then it
17 has to have an aspect ratio length or width, of at least five to
18 one or greater. Then it has to have parallel sides to be a
19 fiber. And then it has to match the chemistry, the defraction
20 patterns for the typical types of asbestos.

21 So you have the geometric size, what you have to count
22 to call it regulated asbestos, and then of course it has to be
23 one of the regulated asbestos types.

24 Q Okay.

25 And can you give the jury a sense of your experience in

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1529

1 identifying asbestos using this EPA/AHERA method that you used
2 as your asbestos counting protocol in this case?

3 A I'm using the same protocol since the late 1980s.

4 Q Did you use this EPA/AHERA protocol in the same way in
5 which you have used this asbestos counting criteria in all the
6 other contexts of your professional work?

7 A Well, it's -- the EPA/AHERA protocol is for the TEM
8 analysis portions that we use. This has a lot of different
9 parts to it, but it's the same counting protocol that's in all
10 these TEM methods, including the ASTM D-5755 method that became
11 a standard method for ASTM in 1995. This is the standard way
12 you do it. This is the method. And if it meets this criteria,
13 the method calls that you record it as regulated asbestos. It's
14 really no guesswork to it.

15 Q Dr. Longo, I'm going to show you what's been marked for
16 identification purposes as Plaintiff's Exhibit 310 and 311.
17 Okay.

18 Dr. Longo, going back to 2017, did you obtain certain
19 products made by Johnson & Johnson over a number of different
20 years spanning many decades?

21 A Yes, we did.

22 Q And at this time in 2017, looking back at that time,
23 did you know of any way you could get products from Johnson &
24 Johnson to test?

25 A I mean, other than brand-new ones off the shelf, no.

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1530

1 Q But if you were looking to test older ones from
2 previous decades, did you know of any way, back in 2017, where
3 you could get any that Johnson & Johnson may have held?

4 A No.

5 Q So how did you then get 30 products of Johnson &
6 Johnson talcum powder products to test back in 2017?

7 A They were sent to us primarily by plaintiffs' attorneys
8 that either bought them from collectors or bought them off of
9 eBay, or had clients that had retained products from when they
10 were using them, or off the shelf. That was the only way we
11 could get them.

12 Q Okay.

13 Did some of the products have certifications from
14 collectors or some documentation to look at in terms of where it
15 came from?

16 A Um, three of the samples that came from the Casson law
17 firm had a collector who gave certification where he got them,
18 but a majority -- a lot of them came from right off of eBay.

19 Q Okay.

20 A And then there was a number of them where the actual
21 client that the law firm was representing had kept the products.

22 Q And for the ones that were purchased off eBay, were you
23 presented with certain information about the eBay purchase?

24 A Just as this is how much it was and this is the person
25 you got it from.

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1531

1 Q And in terms of the testing, do we have pictured here
2 the packaging of the 30 products you tested?
3 A Yes.
4 Q And did they span various years in which there was a
5 metal can, and then we see certain plastic containers that had a
6 certain look, and then certain ones that had even more modern
7 look. Do they span many decades?
8 A Correct. You have some of the metal cans -- that is
9 correct, yes. They do, from '40s up until 2000s.
10 Q And did you, in addition to Johnson's baby powder, did
11 you test some Shower to Shower products as well?
12 A Correct.
13 Q Among the 30 products tested, were there some that
14 contained Italian talc?
15 A Yes.
16 Q And based upon your review of the historical material,
17 is it your understanding that Italian talc was used roughly
18 going back to the 1940s, or earlier, and then to approximately
19 1967?
20 A That is correct.
21 Q And have you also gained an understanding that Italian
22 talc was also used for a portion of 1980 when the Vermont talc
23 workers were on strike?
24 A Yes.
25 Q Have you gained an understanding, through your review

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1532

1 of historical information, that the Vermont talc used in the
2 Johnson & Johnson talcum powder products was used from
3 approximately 1967 to approximately 2003, other than that
4 partial year in 1980?
5 A That's correct.
6 Q And have you also learned that Chinese talc has been
7 used in Johnson baby powder products and talcum powder products
8 from approximately 2004 through the present?
9 A That is correct.
10 Q And among the 30 products, some contain Italian talc,
11 some contained Vermont talc and some contained Chinese talc?
12 A That is correct.
13 Q All right.
14 MR. BROCK: Objection. Can we approach for just a
15 minute, your Honor.
16 (Whereupon, there is an off-the-record discussion.)
17 MR. BROCK: We are good, your Honor. Thank you.
18 THE COURT: Thank you.
19 Q Okay.
20 Now, Dr. Longo, you have these large books in front of
21 you and --
22 MR. BLOCK: May I approach, your Honor, just to see
23 a number.
24 THE COURT: Yes.
25 MR. BLOCK: You have large books in front of you.

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1533

1 Q We are looking at Plaintiff's Exhibit 310 for
2 identification, and the date of that report is August 2nd, 2017;
3 right?
4 A That is correct.
5 Q Now, did this encompass many months of work by Material
6 Analytical Services?
7 A Yes, almost eight months.
8 Q Before you produced this report dated August 2nd, 2017,
9 had Material Analytical Services done a preliminary draft?
10 A Yes.
11 Q Okay.
12 And were there some differences between the preliminary
13 draft and the report that ended up being dated August 2nd, 2017?
14 A Some minor differences, yes.
15 Q And in general, what sort of minor differences are we
16 talking about?
17 A Well, the -- there was, in the draft report, two
18 pictures that said here's a tremolite fiber and it was actually
19 a bundle. Going back to the actual TEM count sheet, the analyst
20 said bundle, so the table was mislabeled. And there was a
21 couple of those. And we were still trying to figure out if we
22 were going to call it richterite, which is a tremolite solid
23 solution series, so just some minor things.
24 Q Was the data the same in terms of the count sheets that
25 are represented in your report?

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1534

1 A Yes. The microscopist that's doing the analyst called
2 it a bundle, and then when the table -- when the figure was made
3 under the photograph, it said fiber on a couple of them.
4 Q Was the goal, then, for your August 2nd, 2017 report to
5 have it be as accurate as possible?
6 A It's always our goal.
7 Q Okay?
8 A But it has to be finalized.
9 Q So looking at the results of your August 2nd, 2017
10 report of these Johnson baby powder products, including Shower
11 to Shower, did you find asbestos in some these products?
12 A We did.
13 Q How many of them did you find asbestos in and how many
14 did you not find asbestos in?
15 A Um, I think it was approximately 18 or 19 that were
16 positive, so about 56, 57 percent initially.
17 Q Okay. Here it says 17 of 30?
18 A I should have looked up there. I would've remembered
19 better.
20 Q Is that consist end with your recollection?
21 A Yes, sir.
22 Q Now, in terms of the concentration in terms of the
23 amount of asbestos you found in these Johnson & Johnson talcum
24 powder products, did you use an accepted methodology of taking
25 the number of asbestos fibers that you found and expressing them

Dr. Longo - Plaintiff - Direct (Mr. Block)

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1 in terms of a concentration of fibers per gram?
2 A Yes.
3 Q How did you do that?
4 A In the TEM analysis you are looking at this grid. In
5 that grid there is area that you are analyzing. The grid -- I
6 don't know if you have seen pictures of a grid already, okay.
7 You've seen it. So you are looking in that area and you count,
8 say, you look at a hundred grid openings, is what we do. And if
9 you find ten fibers or ten bundles of asbestos in that hundred
10 grid openings, then you know that you've analyzed an area of 1.1
11 millimeter squared. Well, the whole filter is 201 millimeters
12 squared, so then you have to do the math on how many of that ten
13 in a hundred would be on the whole filter, since you are taking
14 a random portion of the filter. Then you calculate it to how
15 much you test it. It's standard protocol for TEM analysis,
16 because you cannot analyze the entire sample.
17 Q Okay.
18 And so was there a range of the amount of asbestos that
19 you found in the 17 of the 30 products that you found to contain
20 asbestos?
21 A We range from right at our detection limit of
22 approximately 8,000 8,800, 8,700, up to 15 million one hundred
23 fibers per gram of regulated asbestos.
24 Q So we have concentrations as high as 15 million fibers
25 per gram, 4,120,000 fibers per gram 1,310,000 fibers per gram,

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1 and then we have some ones that are down at around 8,600 or
2 8,700 fibers per gram; is that right?
3 A That's correct.
4 Q And so for the ones that are very lowest, how many
5 fibers of asbestos were found for the ones that are at the
6 lowest level of detection?
7 A That is right at our detection limit. Either one fiber
8 or one bundle of regulated asbestos.
9 Q Have you been able to bring your key text limit down
10 since you tested these three?
11 A Our lowest detection limit now about 3,500
12 fibers/bundles per gram.
13 Q So we looked earlier at the limit of detection. So
14 with respect to the 13 of these 30 that you did not detect
15 asbestos, are you able to conclude that those samples of Johnson
16 talcum powder products contain zero asbestos?
17 A No.
18 MR. BROCK: Objection, your Honor.
19 THE COURT: Looking for a foundation?
20 MR. BROCK: I object to foundation.
21 MR. BLOCK: So I'll do that, your Honor.
22 THE COURT: Very well.
23 Q So based upon the limit of detection that you have for
24 this testing of Johnson & Johnson talcum powder products, what
25 are you able to determine with regard to the 13 of the 30 in

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1 which you did not detect asbestos?
2 A You could only determine that there's no asbestos
3 present above -- at or above your detection limit. So if you
4 have a detection limit of 8,000 and you don't find anything, you
5 can just say it's non-detect, that at a minimum, you could say,
6 from the concentration present, if present at all, is below
7 8,000 fibers/bundles per gram. It's not saying it's there. You
8 can't say it's not there. You can -- and that's how it works in
9 the analytical world. It's always less than your detection
10 limit. It never says it's not there, it's clean, but less than
11 your detection limit.
12 Q Okay.
13 Dr. Longo, let me ask you about this column. It says
14 aspect ratio. Can you talk to us about what you found in terms
15 of the aspect ratio of the asbestos you found in these Johnson &
16 Johnson talcum powder products in terms of the length versus the
17 width of the asbestos particles?
18 A If you recall, the protocol says that the aspect ratio,
19 how many times long it is within wide, has to be greater than or
20 equal to five to one. So for each of the sets of samples, we
21 calculated the average aspect ratio. And the average aspect
22 ratio for each set of samples for the 15 million one hundred
23 fibers per gram, we counted over a hundred fibers and bundles.
24 The average aspect ratio of that was 12 to one.
25 At the end of the day, all the aspect ratios for all

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1 the particles was approximately ten to one. And that was two
2 hundred and something individual fibers --
3 Q All right.
4 A -- and bundles.
5 Q And it says "fiber type" and you list -- let me ask you
6 about the first one that is listed as tremolite in a number of
7 the samples. Did you find tremolite asbestos in these Johnson
8 baby powder samples?
9 A Yes. According to the counting rules these are all
10 regulated tremolite asbestos fibers or bundles.
11 Q And we see the jury heard a lot about tremolite. We
12 see -- and the jury heard about anthophyllite. We see one that
13 says richterite. What is richterite?
14 A Richterite is a form of tremolite. It's a little
15 complicated. It's called the solid solution series for
16 tremolite. And what happens is when tremolite is formed from
17 the magma or volcanic, there is all different chemistry, solid
18 solution chemistry going on.
19 If the area where it's being formed has some potassium
20 in it, it would get incorporated into the mineral or the
21 crystal, and because it has that potassium or sodium, it's
22 called richterite. It used to be called sodic tremolite, or
23 just tremolite, but now it's been a little bit more redefined.
24 So everything else is the same, except that it has a
25 little potassium element peak, and you call it richterite. So

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1539

1 you have tremolite, winchite, richterite and actinolite. This
2 is all the tremolite solid solution series.
3 Q Was each product that you sampled from given a sample
4 ID that shows up in your data?
5 A Yes, sir.
6 Q All right.
7 And then you have the sample type, and JBP stands for
8 Johnson's baby powder?
9 A It does.
10 Q And they are all Johnson's baby powder, and then two of
11 them are Shower to Shower, S/S?
12 A Shower to Shower, but not Johnson & Johnson Shower to
13 Shower for those two.
14 Q So at some point, was it in the later 2000s, like 2012
15 or so, did Johnson & Johnson, did another company start selling
16 Shower to Shower?
17 A I think they sold them the product line, if I read it
18 correctly, and then they were selling the same thing.
19 Q So let's go ahead and look at -- inside some of your
20 data here. And we could see, if we look at this, it says
21 M65205-001. And is that the sample ID?
22 A It is.
23 Q And then we have a dash 075?
24 A The 075 means that is the 75th tremolite -- regulated
25 tremolite asbestos fiber bundle that we've come across during

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1540

1 the analysis. So we label every one and take a picture of it
2 and did the chemistry, et cetera.
3 Q Is this the picture of tremolite asbestos as seen
4 through the electron microscope from a sample of Johnson's baby
5 powder that you tested?
6 A Yes, using the counting rules, EPA, et cetera, it meets
7 the definition. That's the length. So that 4.4 micrometers is
8 greater than or equal to 0.5, and the aspect ratio -- it has to
9 have parallel sides. That is parallel sides. There is a little
10 bit in the middle there where you could see its laying on a talc
11 plate. And point two micro meters, so if you divide 4.4 by
12 point two, that should give you approximately 20 -- I think it
13 is -- an aspect ratio of 20 to one or so.
14 Q So what is below this tremolite asbestos that you found
15 in Johnson's baby powder? What is this material here on the
16 center to bottom right part of the picture from the electron
17 microscope?
18 A That is talc.
19 Q And so if you did not do the heavy liquid separation
20 method that Dr. Blount published about what would this look
21 like?
22 A You could make it look the same, but you would have to
23 do a serious dilution to it so that you could get them spread
24 out. If you were to use the same weight without the heavy
25 liquid density separation that we used, if you used that exact

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1 same weight, you couldn't analyze it. The grid openings would
2 be all covered up.
3 Q All right.
4 So, I want to ask what you did with each particle of
5 asbestos to confirm that it was asbestos. So you have the
6 picture from the electron microscope. What about the chemistry
7 of the particle? Did you do a chemistry analysis to determine
8 whether it's asbestos?
9 A Yes, the EDS. We can take the individual chemistry on
10 that microscopic fiber. And if you go from left to right, the
11 very first thing you see is Cu, which is copper. And if you go
12 to the far right, you should have a big copper peak -- that's
13 calcium. So it's been cut off. The copper peak is because it's
14 sitting on top of grid and you get fact scattering elements from
15 that. Then you have magnesium, silicon, calcium and a little
16 iron.
17 Q So the magnesium, Mg; is that right?
18 A Correct.
19 Q Silicon, Si; is that correct?
20 A Right.
21 Q And then calcium, Ca?
22 A Ca, and then we see iron. And then we have the rest of
23 the copper peak.
24 Q If you could just sort of give us a way to remember.
25 How do we know we are looking at the chemistry of tremolite?

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1542

1 A That ratio. You see, if you were to take silicon in
2 the middle.
3 Q Okay. The high peak?
4 A Let's say an arbitrary ten. The magnesium is going to
5 be approximately 2.5 to three aspect ratio, 2.5, and then the
6 calcium is going to be about two. So you always have this high
7 silicon peak, magnesium higher than calcium, but not too much.
8 It's a pattern that we see over and over and over, and because
9 it's fibrous, because it has an amphibole -- you get to the
10 defraction. That's absolutely tremolite.
11 (Continued on the next page.)
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2 Q. Okay. So we had the magnesium and then we
3 have the silica and then there is sort of a little
4 downhill between the magnesium and the calcium?
5 A. Correct. That is a fingerprint for
6 tremolite.
7 Q. And so we have also heard from Dr. Webber
8 that you also looked at the chrystalline structure to make
9 sure that this is tremolite asbestos. And what are we
10 looking at here for the same particle of asbestos,
11 M65205-001-075. And that's what we were looking at the
12 chemistry of that particle, right?
13 A. Correct.
14 Q. Now what are we looking at in terms of to
15 confirm the chrystalline structure?
16 A. This is the defraction pattern of that fiber.
17 And you can see that going from top to bottom, little bit
18 left to right, you can see these row of dots. Those rows
19 of dots are showing us the actual chrystalline structure.
20 What we're interested in here is the distance from row to
21 row. That's the distance from one row of atoms to the
22 next. That's a very precise distance for what we call
23 amphibole. And we just verify that that has the same
24 distance that it's suppose to have for these type of
25 asbestos -- regulated asbestos here tremolite. So you
26 couple that with the chemistry. Then you have the

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1 Direct-Longo-Block
2 morphology that is fibrous. And it meets a definition of
3 regulated asbestos fiber.
4 Q. All right. So for each and every particle of
5 asbestos that Material Analytical Services found in
6 Johnson's Baby Powder and Shower to Shower with the
7 transmission electron microscope, did you document that
8 with a picture of each particle of asbestos, the EDS
9 showing the chemistry of each particle of asbestos and the
10 SAED showing the chrystalline structure of each particle of
11 asbestos?
12 A. No, yes and yes.
13 Q. Okay.
14 A. The no is in this particular sample we had
15 over a hundred some odd fibers and bundles, so we took
16 representative pictures. We always verify to have the
17 chemistry. We always verify to have the defraction
18 pattern. If we're seeing fibers of this many asbestos
19 fibers in one sample, then we'll -- may not document every
20 one of them.
21 Q. Okay.
22 A. But most all the other ones we have, just
23 because it's repetitious of the same thing.
24 Q. All right. And now is there a way for a lab,
25 when they see tremolite asbestos in a sample, to compare
26 it with a known reference that everyone agrees is

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1 Direct-Longo-Block
2 tremolite asbestos?
3 A. Yes.
4 Q. And did you do that in your testing of
5 Johnson's Baby Powder when you found asbestos?
6 A. Well, no. We did that a long time ago when
7 we got certified for making these types of analysis.
8 Q. How do you use these reference samples to
9 make sure that your analysts are properly trained to
10 identify tremolite asbestos?
11 A. We had these references in our lab since we
12 got our certification since we opened the door. These
13 references have been used over and over. Analysts, new
14 analysts will analyze these as a blind sample. So, even
15 though we're analyzing tremolite asbestos in the cosmetic
16 talc, we have been doing this same thing for years and
17 years and years. But yes, we had these standards, and we
18 did compare them to the tremolite that we were finding in
19 the cosmetic talc.
20 Q. So this National Institute of Standards and
21 Technology, how does it work? You can order?
22 A. You order from them. They are the
23 national -- they are the standards in technology of the
24 U.S. Department of Commerce. It's not only asbestos.
25 They have all kinds of standards for all kinds of testing
26 labs. It's a requirement that we have those standards in

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1 Direct-Longo-Block
2 our facility in order to make those identifications.
3 Q. All right. So, earlier we saw an example of
4 what tremolite asbestos in Johnson's Baby Powder looks
5 like. Is your lab able to utilize pictures of what
6 tremolite asbestos looks like in the known tremolite
7 asbestos NIST standard?
8 A. Yes.
9 MR. BROCK: May I ask, just so we could have
10 a good record, may I ask since the slides are not
11 numbered, if you can just state the title please of
12 the slide that you're referring to so we'll have a
13 record of it.
14 MR. BLOCK: Sure. National Institute of
15 Standards and Technology, tremolite standard. On the
16 left side you see pictures of tremolite asbestos.
17 Q. And can you tell ladies and gentlemen of the
18 jury how if at all, that is consistent or not, with the
19 tremolite asbestos you found in the Johnson's Baby Powder
20 and Shower to Shower?
21 A. Well, one, it meets a definition of a
22 regulated asbestos fiber on the left side, because it's
23 parallel sides, has the right length aspect ratio. Then
24 if you look on the right side, those two different
25 tremolite regulated asbestos/bundles, the chemistry is
26 identical. And if you look at the chemistry of what we

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1 Direct-Longo-Block
2 found in Johnson and Johnson, it is identical. You have
3 high silica. The magnesium and calcium ratio is kind of
4 in a downward slope.
5 Q. So, just to review, what we looked at in an
6 example of the chemistry analysis for the asbestos in
7 Johnson's Baby Powder, you showed us the magnesium and
8 silica and calcium going a little downhill from the
9 magnesium, is that right?
10 A. Correct.
11 MR. BROCK: I'm sorry to interrupt. Can you
12 go back another one. I want to make sure we have it
13 for the record. Is the EDS on this number 75?
14 MR. BLOCK: Yes. We looked at that earlier.
15 Yes.
16 Q. So, if you go to the standard, the National
17 Institute of Standards and Technology, do we again see the
18 magnesium and then the silica and then the calcium going
19 downhill from the magnesium?
20 A. Correct. It's a fairly unique ratio for
21 fibrous material and then of course the selected area
22 electron defraction.
23 Q. All right. Dr. Longo, the book is thick.
24 I'm not going to go through every picture and every EDS
25 and every SAED. I would like to ask you about some of the
26 particles and some of the pictures, just to talk about

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1 Direct-Longo-Block
2 what we're looking at and what it means. So, I'm looking
3 at this, this particular particle of asbestos in sample
4 M65329-041. And that would be the sample, is that the
5 sample ID?
6 A. That is. It's our sample ID. And then that
7 number five would be the fifth, fifth asbestos structure,
8 fiber or bundle, in this particular case tremolite, that
9 we have run across so far.
10 Q. All right. And what could you describe for
11 the jury in this picture that would help them understand
12 your analysis finding asbestos in Johnson and Johnson
13 talcum powder products?
14 A. It has parallel sides. 9.45 micrometers in
15 length. It meets the minimum dimension for regulated
16 asbestos. It has an aspect ratio of almost ten to one or
17 so. Parallel sides. And this particular case it's a
18 bundle. You can see, at the top of the left-hand side,
19 you can actually see individual fibers sort of protruding
20 from this structure.
21 Q. Like in the upper left?
22 A. Yes. And down at the bottom you can also see
23 some of these structures. Now it's dark in the middle,
24 because it's electron dense. It's too thick to actually,
25 when you take the photograph, but that's what we would
26 designate as a bundle. A bundle is -- is defined as three

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1 Direct-Longo-Block
2 or more fibers parallel in touching. So that there is no
3 -- no light between them. No electron light between them.
4 And then, of course, the chemistry. And then the selected
5 area electron defraction matches what you would expect for
6 tremolite. So, therefore it's tremolite. Then the rest
7 then we have some additional talc plates.
8 Q. All right. And the talc that can be seen
9 here, are we looking at the upper center or the mid right?
10 What are we looking at there?
11 A. Both. You have a very thick talc plate
12 towards the bottom on the right-hand side. And you can't
13 see through it. So, it's very electron dense. It's a
14 thick plate of talc. And then upper right, along on up is
15 some more talc plates.
16 Q. Is one of the important reasons of using the
17 heavy liquid separation so you could have as little of
18 this talc here so you can see the asbestos?
19 A. Yes.
20 Q. So looking at the next picture from sample
21 65208-001-002, it says tremolite. What are we looking at
22 that there, Dr. Longo?
23 A. That's another bundle. So, you can see
24 the -- on the upper right-hand side you can -- this bundle
25 is not quite as thick. You can see more of the individual
26 fibers. And you can see, starting at the upper right-hand

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1 Direct-Longo-Block
2 side, looking at from the top going around, you can see a
3 number of individual fibers. Then to the other side you
4 see it's a little more electron dense. You can see other
5 fibrous. So that would be a bundle. And again it's
6 tremolite. You'll have the same chemistry in the same
7 select area defraction analysis that you had for the rest
8 of them.
9 Q. Let me ask you. So, we talked earlier about
10 the amount of asbestos as expressed in fibers per gram.
11 So, when you found this bundle of tremolite asbestos in
12 Johnson's Baby Powder, you count this as one particle or
13 do you count up all the fibers that are together in this
14 bundle and count those as multiple particles?
15 A. No. You only count it as one structure, one
16 bundle. You cannot estimate how many are in there.
17 Nobody has ever agreed, looking at one of these
18 micrographs, how many is there. So, they eliminated that
19 as part of the count, just to get conformity across the
20 board. So you just count it as one asbestos structure,
21 fiber or bundle.
22 Q. Okay. I want you to assume the jury has
23 heard testimony from Dr. Webber that particles of asbestos
24 that are three microns or less in their width or diameter
25 are respirable. Can you tell us whether this tremolite
26 asbestos particle, what's the width or diameter of this

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1 Direct-Longo-Block
2 particle?
3 MR. BROCK: Object to the form of the
4 question. I think that's a question for Dr. Webber
5 to answer when he comes back potentially.
6 THE COURT: Do you understand the question?
7 THE WITNESS: I do, your Honor.
8 THE COURT: Are you able to answer it?
9 THE WITNESS: Yes, sir.
10 THE COURT: Go ahead.
11 A. It's less than three micrometers. It's .6.
12 So, it's almost a factor of five times less.
13 Q. Okay. Dr. Longo, let's look at this next
14 structure. And this comes from sample M66173, which the
15 chart you looked at earlier indicates is Johnson's Baby
16 Powder. Tell us about this tremolite asbestos from
17 Johnson's Baby Powder.
18 A. Again we have parallel sides. It looks to be
19 I would call a bundle. And you have to understand when it
20 gets close like this, you have to leave it up to the
21 microscopist to make that decision where it's not like the
22 bundle before where you can see all those fibers sticking
23 out. When he's on the microscope, he can focus through
24 the fiber and he can also put in some binocular types that
25 increase the magnification by 20 times. But I would say
26 looking at the end where you have that little step on the

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1 Direct-Longo-Block
2 lower left-hand side, see that step?
3 Q. (Pointing).
4 A. That's actually fibers that are in a step
5 process coming out of the end of the bundle. So, I would
6 say that's a bundle.
7 Q. Okay. And we have other pictures. Let's
8 move on to M66214. Actually M66514. Is that the
9 proper --
10 A. That's the proper.
11 Q. Okay. So, this on the bottom, it should say
12 66514?
13 A. Yes. The New York copy has been corrected.
14 MR. BROCK: I'm sorry. Which number are we
15 using, the one at the top?
16 MR. BLOCK: We're using M66514.
17 Q. What we see here is three different particles
18 of asbestos in this Johnson's Baby Powder.
19 A. Yes, we do. Three, because you can see that
20 there is -- you can see -- you can see the opening between
21 the fibers. You actually call those three different
22 structures or three different fibers.
23 Q. All right. And here it shows anthophyllite
24 asbestos in Johnson's Baby Powder. Is this another type
25 of asbestos, including tremolite, that we looked at
26 earlier?

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1 Direct-Longo-Block
2 A. Yes. You have the tremolite solid solution
3 series and then you'll have the anthophyllite solid
4 solution series is what we're primarily finding. I think
5 that's all we're finding in the mines at issue here.
6 Q. Actinolite asbestos in this M66510, which is
7 from Shower to Shower. And this Shower to Shower product
8 you found actinolite asbestos. What can you tell us about
9 this photo from the transmission electron microscope
10 showing actinolite asbestos in Shower to Shower?
11 A. It looks like -- It's close to a bundle, but
12 actinolite is again one of the series of tremolite.
13 Tremolite, actinolite, that's two parts of the solid
14 solution series. If you have the EDS spectra it shows
15 that it has the same ratio of magnesium in calcium but it
16 has higher iron on the tail end.
17 Q. And you saw the historical documents we have
18 looked at. We've actually seen reference to
19 tremolite/actinolite. Are they very similar?
20 A. Yes. They are both regulated asbestos fibers
21 and they have -- they are very similar in their -- the
22 amount of iron is different in the amount of chemistry.
23 Q. And in this Shower to Shower M66510, we see
24 richterites. And is that a fiber of richterite asbestos
25 from Shower to Shower?
26 A. Yes. That's again parallel sides. It's

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1 Direct-Longo-Block
2 11.2 micrometers long. It's greater than or equal to 0.5.
3 It's .2 micrometers wide. So that is a 50 to one aspect
4 ratio approximately. So, certainly greater than five to
5 one, equal to five to one.
6 Q. All right. And this next slide, is this the
7 EDS for this structure of richterite which is structure
8 two from M66510-001, the Shower to Shower product?
9 A. It is.
10 Q. We're looking now at the chemistry of it.
11 And we have circled one part of the EDS chemistry
12 analysis. And why is that one part important in comparing
13 richterite asbestos to tremolite asbestos?
14 A. 'Cause the only difference is that the
15 potassium element there, K. And because you have
16 potassium, you will have a little bit lower calcium.
17 Otherwise it's tremolite. And for years and years this
18 was called tremolite or sodic tremolite. It's only when
19 they changed the nomenclature and then EPA made Libby,
20 Montana a super fund site. So now instead of just saying
21 it's tremolite and actinolite, they say it's mostly
22 winchite, richterite, tremolite and a little actinolite.
23 Q. Okay. So there is richterite asbestos. Is
24 that something that historically could be found in attic
25 insulation such as Zone Light attic insulation that used
26 Libby, Montana vermiculite?

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1 Direct-Longo-Block

2 A. Libby, Montana vermiculite was used as attic

3 insulation. And that attic insulation would have

4 winchite, richterite, tremolite, actinolite.

5 Q. So, how do you know that the richterite

6 asbestos that you found in this sample of a Johnson &

7 Johnson talcum powder product, how do you know it didn't

8 come from contamination from some attic insulation?

9 A. For two reasons. First reason is less

10 scientific, but you would have to have the container.

11 Open it up. Stick it up in your attic. And then get up

12 there and disturb all that vermiculite over and over again

13 to try to get these concentrations in the bottle. But the

14 scientific reason is the richterite, winchite, tremolite,

15 actinolite, winchite and richterite is approximately

16 .01 percent of the vermiculite used in attic insulation.

17 If that richterite came from the attic insulation and got

18 in the container, how come there is no vermiculite in

19 there? You can't have .01 percent of something of a

20 mixture and 99.9 percent of the other stuff is not there.

21 The only thing in this sample is talc and a little bit

22 other accessory minerals and this richterite. So, you

23 can't have it both ways.

24 We found it with the talc. Talc is in there.

25 There is no vermiculite in there. To think how much

26 vermiculite would have to be in there to get this kind of

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1 Direct-Longo-Block

2 concentration, that .01 percent, there is no chance that's

3 what happened.

4 Q. All right. So -- so the asbestos that you

5 found in the Johnson's Baby Powder, Shower to Shower, was

6 that properly identified asbestos as on the EPA AHERA

7 method?

8 A. Yes.

9 Q. Did you find some particles that were longer

10 than five microns in length and some particles that were

11 shorter?

12 A. We did.

13 Q. For the particles that were greater than five

14 microns in length, is that countable asbestos under OSHA

15 and MSHA, the Mine Safety and Health Administration?

16 A. Any of the bundles that were greater than

17 point -- greater than five micrometers, it had a width

18 that was greater than .25 micrometers wide, would have met

19 every definition up there.

20 Q. All right. In terms of the TEM methodologies

21 that you're aware of and that you've used throughout the

22 course of your career, was the asbestos you found in

23 Johnson's Baby Powder and Shower to Shower products

24 properly accountable under asbestos under those laboratory

25 analytical protocols?

26 A. Yes.

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1 Direct-Longo-Block

2 Q. Let's talk about Johnson & Johnson's method.

3 Does Johnson & Johnson have a method that the jury heard

4 about called TM 7024?

5 A. Yes, sir.

6 Q. Have you reviewed that method?

7 A. All of them.

8 Q. All right. And was the asbestos that you

9 found in Johnson & Johnson Baby Powder and Shower to

10 Shower properly accountable as asbestos as under Johnson &

11 Johnson's own TEM test method?

12 A. Yes.

13 Q. If we go to --

14 MR. BROCK: I'm sorry. Could you go back.

15 Just for the record, the one you've been talking

16 about is titled "Asbestos Counting Protocols"?

17 MR. BLOCK: Yes.

18 Q. If we go to the next slide we see that this

19 is Exhibit 4. That the jury has already seen in this

20 case. And it's dated March 8th, 1989. And you see the

21 Johnson & Johnson TM 7024 method?

22 A. Correct.

23 Q. Are you aware and familiar with Johnson &

24 Johnson's definition that they use out of court for what

25 is a fiber properly identified by TEM analysis when

26 looking for asbestos?

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1 Direct-Longo-Block

2 A. Yes.

3 Q. What is it?

4 A. That it has parallel sides, and that the

5 aspect ratio length to width is greater than or equal to

6 three to one.

7 Q. Okay. Now, you just told the jury that you

8 only counted asbestos that was five to one when you

9 counted asbestos in the Johnson & Johnson's talcum

10 products, is that correct?

11 A. That's correct. That is the TEM method that

12 is well accepted in the scientific community today and

13 what we're certified to do, what we have to do when we

14 count asbestos using that method.

15 Q. If you had -- So, if you had used Johnson &

16 Johnson three to one requirement as opposed to your five

17 to one requirement, would you have counted more?

18 A. Yes.

19 Q. So the definition you used in terms of aspect

20 ratio for your testing, was it more restrictive or less

21 restrictive than Johnson & Johnson's own TEM standard for

22 identifying asbestos?

23 A. It's more restrictive on the aspect ratio.

24 Q. The jury has also seen Exhibit 2, which is

25 Johnson & Johnson has raw material specification

26 requirements for testing its talc used in its baby powder

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1 Direct-Longo-Block
2 and Shower to Shower products for asbestos. Are you
3 familiar with the J4-1 method and also the TM 7024 method
4 that we just looked at?
5 A. Yes.
6 Q. And looking at Johnson & Johnson's
7 definition, we'll take it one step at a time. It says --
8 Strike that. Johnson & Johnson's raw material
9 specifications says "Asbestos is defined to be the fibrous
10 serpentine, chrysotile and the fibrous forms of the
11 amphibole group as represented by amosite, anthophyllite,
12 crocidolite, tremolite and actinolite." Do you see that?
13 A. Yes.
14 Q. Did you find fibrous tremolite in Johnson's
15 Baby Powder and Shower to Shower products?
16 A. We did.
17 Q. Do you agree with the definition that Johnson
18 & Johnson gives that that's asbestos?
19 A. Yes, I do.
20 Q. And did you find fibrous anthophyllite in
21 Johnson's Baby Powder and Shower to Shower products?
22 A. Yes.
23 Q. Is that asbestos?
24 A. It's asbestos according to the counting rules
25 and regulations that we have to follow for these types of
26 methods.

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1 Direct-Longo-Block
2 Q. All right. Is the same true for fibrous
3 actinolite? Did you find fibrous actinolite in Johnson &
4 Johnson talcum powder products?
5 A. Yes. We found fibrous tremolite solid
6 solution series as well as the anthophyllite solid
7 solution series. And those sub series where you have
8 tremolite, winchite, richterite, actinolite, those are all
9 fibrous. In anthophyllite series is anthophyllite,
10 cummingtonite and grunerite. And those are all fibrous.
11 Q. Okay. And were the fibrous amphiboles that
12 you found in Johnson & Johnson's talcum powder products
13 asbestos under all the laboratory and analytical methods
14 for TEM microscopy that you follow as a professional?
15 MR. BROCK: I'll object to the form of the
16 question. It included a few different standards. So
17 I think you need to be specific on that, please.
18 THE COURT: All right. Be more specific,
19 please.
20 Q. Under what standards was the -- were the
21 fibrous amphiboles you found in Johnson & Johnson talcum
22 powder products properly counted asbestos?
23 A. For the TEM it matches the standards for the
24 EPA AHERA. Only the TEM, the methodology. The ISO TEM
25 methods both for ambient air and for indirect preparation,
26 TEM methods. The two ASTM methods. The D5755 and the

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2 D5756, people are still using that method, but that was --
3 the 56 one was withdrawn by ASTM last year.
4 Q. And the ASTM 5755 that you just testified,
5 would properly count the asbestos you found in Johnson &
6 Johnson's talcum powder products as asbestos, is that the
7 one you told us about earlier, that you went through that
8 long process in creating with the ASTM group?
9 A. Yes. It's still been -- it's still a
10 standard. It's been validated. You have to understand
11 every one of those has the exact same accounting rules.
12 Every one of them says greater than or equal to 5
13 micrometers -- 0.5 micrometers in length. Has to have
14 parallel sides. Has to have at least a five to one aspect
15 ratio. And then, of course, match the chemistry and
16 crystalline for asbestos. And it's all regulated
17 asbestos. Every one of those methods is the same for TEM.
18 Q. All right. Under Johnson & Johnson's raw
19 material specification, are fibrous amphiboles asbestos?
20 A. That's their definition, yes. I agree with
21 it.
22 Q. The jury has heard terms such as asbestiform
23 habit. Does it say anything in Johnson & Johnson's
24 definition about asbestiform habits?
25 A. No. The habit -- Asbestiform means nothing
26 more than it's formed like asbestos. The habit is

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1 Direct-Longo-Block
2 crystalline. It's a crystalline habit.
3 Q. Was the asbestos that you found in Johnson &
4 Johnson's Baby Powder and Shower to Shower asbestiform?
5 A. It meets the geological -- It meets the
6 definition of what asbestiform is. It's just formed like
7 asbestos. Everything we counted and reported is regulated
8 asbestos based on the health criteria. The health effects
9 criteria. It's not me calling it asbestos. These are the
10 protocols that have been around years and years.
11 MR. BROCK: Objection, your Honor. This is
12 way beyond the answer to the question.
13 THE COURT: Way beyond.
14 THE WITNESS: Sorry again, your Honor.
15 THE COURT: Thank you. The jury is
16 instructed to disregard the answer after the
17 introduction. What was it, a yes? It's not there.
18 MR. BLOCK: Well there was --
19 THE COURT: You can ask a follow-up question.
20 MR. BLOCK: Sure.
21 THE COURT: It's --
22 MR. BROCK: I think the answer at the end of
23 everything we counted and reported is regulated
24 asbestos based on the theory.
25 THE COURT: Yes.
26 Q. And the jury has heard about a high tensile

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1 Direct-Longo-Block
2 strength. The term high tensile strength. Is there
3 anything in Johnson & Johnson's definition about high
4 tensile strength?
5 A. No, there isn't.
6 Q. And how about in their definition, in Johnson
7 & Johnson's out-of-court definition, anything about the
8 flexibility of the fibers?
9 MR. BROCK: I'm objecting. Continued
10 reference to out-of-court position. I think that's
11 argumentative.
12 MR. BLOCK: I can lay a foundation, your
13 Honor.
14 THE COURT: All right.
15 Q. Dr. Longo, in reviewing Johnson & Johnson's
16 raw material specifications, have you been able to
17 determine whether they were created for litigation or they
18 were just specifications that they truly used outside of
19 court?
20 MR. BROCK: I will object to that witness
21 commenting on created for litigation. That's not
22 appropriate for an expert.
23 THE COURT: Sustained as to that part.
24 MR. BLOCK: Okay.
25 Q. So, Dr. Longo, looking at some other
26 standards. I think you addressed this so far. But was

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1 Direct-Longo-Block
2 the asbestos that you identified in Johnson's Baby Powder
3 and Shower to Shower, is that accountable asbestos? Is
4 that properly counted as asbestos under the ISO ASTM
5 standards as well?
6 A. Yes. They all have the same definition. The
7 geometry of it, aspect ratio, it's called regulated
8 asbestos.
9 Q. All right. Now, this ASTM 5755, that's the
10 one that you said that you worked to create, and is that
11 still in effect today?
12 A. Yes.
13 Q. How about ASTM 5756, is that still in effect
14 today?
15 A. No.
16 Q. And who created that one?
17 A. That was my counterpart, RJ Lee Group.
18 Q. Dr. Longo, did you -- Since these products
19 did not come directly from Johnson & Johnson that you
20 tested, did you take any steps to determine whether the
21 packaging showed any signs of tampering? Did you look at
22 that issue?
23 A. Yes.
24 (Continue on the next page.)
25
26

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Dr. Longo - Plaintiff - Direct (Mr. Block)

1 Q And we are looking at a picture right now, and it's the
2 top of a Johnson & Johnson container. And we could see 275RB.
3 What does this picture have to do with the evaluation you did to
4 assure that there was no tampering with these products?
5 A The first thing we wanted to do is see if you could
6 take the tops off. It's -- the tops were a turn, and you have
7 dispensing holes. We shake it out like a salt shaker. You
8 can't, at least by human pressure, you cannot get that top off.
9 It's designed not to be able to come off so you don't spill it.
10 So then we wanted to see if we pried the top off, would
11 that polymer or plastic leave any tracks that somebody had pried
12 it off. So we did that on a couple of samples.
13 So on the left-hand side where that blue, there is blue
14 coming down the cap. If you look under there, you can't see any
15 damage. And then after the top was pulled off, the screwdriver
16 caused indentation at the top. It's the only way you could get
17 the container -- the top off without just cutting it.
18 Q So did you do an experiment to determine whether if you
19 pried the top off, it would show damage?
20 A Yes. So we concluded that all these containers, except
21 for one, the tops had not been taken off.
22 Q All right. How about that one?
23 A You may have a photograph of it. Maybe not.
24 Q I don't think I do, but tell us -- actually, I think I
25 do.

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Dr. Longo - Plaintiff - Direct (Mr. Block)

1 MR. BLOCK: Can we switch to the Elmo, please.
2 (Whereupon, a demonstrative aid was shown on the
3 screen.)
4 Q And is this the photograph you were thinking of?
5 A Yes. You have on the top is cans that were sent to me.
6 These cans were all sent to me by one plaintiff's attorney. And
7 on the top is a canister. You could see three of them that are
8 identical. And those cannisters were never -- never had talcum
9 powder in them. They don't even have a dispenser on them. They
10 were an anniversary can, I think a hundred year anniversary can
11 that had a coupon inside. So the attorney had sent me these
12 samples, sent me four empty containers.
13 Now the last container is an older one, and it does
14 have the dispenser on top, and these are the metal containers.
15 You can't get those tops off either. And one of the ways you
16 can get these tops off is to damage it around the side, like
17 this one, where it's all bent in (indicating). This is not a
18 sample we analyzed. There was nothing in it.
19 Q So for the 30 samples you analyzed?
20 MR. BROCK: I'm going to ask for a record if you
21 could say what page in the report that is. That's the one
22 with the metal.
23 MR. BLOCK: Yes.
24 Q So for the 30 samples you did analyze, did you, in your
25 analysis, determine that they did not have evidence of being

Dr. Longo - Plaintiff - Direct (Mr. Block)

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1 tampered with or of the tops being pried off, either the plastic
2 or metal containers?

3 A We did, there was no evidence of the containers being
4 tampered.

5 Q Did you do any work in terms of looking at the particle
6 size of the Johnson's baby powder, Shower to Shower products
7 compared to ones that you just bought off the shelf?

8 A Yes.

9 Q Tell us about that?

10 A We wanted to see if the particle sizes -- this is all
11 cosmetic talc. It all goes through what we call a 200 mesh
12 screen. You want to get the smallest particle. So it's milled.
13 So we wanted to see if their specifications, if we analyzed the
14 same way, sample after sample, all these 30 sample's, compared
15 to the one off the shelf, would the particle size distribution
16 be different or have the same particle size distribution for the
17 amount of particles from low to high. And we found that the
18 particle size distribution was the same, essentially, consist
19 the from all 30 and compared to something off the shelf.

20 Q So you went out and bought some Johnson's baby powder
21 just right off the store shelf, and then compared the particle
22 size of those products compared to the 30 you tested?

23 A Yes.

24 Q And was it consistent?

25 A It was all consistent.

Dr. Longo - Plaintiff - Direct (Mr. Block)

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1 (Whereupon, a demonstrative aid was shown on the
2 screen.)

3 Q Let me ask you, the jury heard about laboratory blanks.
4 How-- when you do a test, you can do the test with blanks and
5 make sure there's no asbestos so that when you test a sample, if
6 you find asbestos, you could assure yourself that the asbestos
7 came from the actual talc sample.

8 Did you use laboratory blanks as part of the testing
9 here?

10 A Yes, but they are not really laboratory blanks. They
11 are call process blanks.

12 Q Okay. "Process blanks", what is that?

13 A Laboratory blanks is you just take one of the filters
14 and you haven't done anything to it and you put it in an analyze
15 it and make sure there is nothing there.

16 Q What did do you with process blanks in this testing to
17 assure there was no contamination?

18 A Everything was done exactly the same with the process
19 blank, except no talc.

20 MR. BROCK: I'm sorry, could you speak up a little
21 bit.

22 A I'm sorry. Everything was done exactly the same,
23 except no talc. So the heavy liquid, the centrifuge, the whole
24 process is the same. Liquid nitrogen, cutting it, filtering it,
25 but no talc. If there is any contamination in the lab, you

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1 would see it.

2 We have not had any of these process blanks for any of
3 these cosmetics talcs, and we've done a number of them. Each
4 set of samples has a process blank, did we ever find any
5 asbestos on the process blank. And we just don't do this for
6 cosmetic talc. We do it for all our samples.

7 If, you know, they'll send us -- when we do filters, or
8 we are filtering anything, we run process blanks. I cannot
9 recall the last time, ever, that we had any asbestos in any
10 process blank. And certainly there was none in any of the
11 Johnson & Johnson process blanks, to date.

12 Q All right. And then we have a picture of -- is this a
13 hood or some kind? Or what kind of device are we looking at
14 here? There is a yellow sticker in the upper center, and
15 there's, it looks like some glass. What is that and does that
16 have anything to do with, I guess, guarding against
17 contamination?

18 A That's a biological safety hood. That is guarding
19 against anybody who is preparing these samples from getting
20 contaminated, because it's all designed for the air flow to go
21 in through the filtration system.

22 Anything that is released inside that hood is filtered
23 out, and then every set of samples, that hood is completely
24 decontaminated. So, yes, we make sure the folks working there
25 doing the preparation don't get contaminated, as well as any

Dr. Longo - Plaintiff - Direct (Mr. Block)

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1 cross contamination between samples.

2 (Whereupon, a demonstrative aid was shown on the
3 screen.)

4 Q Dr. Longo, we talked earlier that in 2017 you did not
5 have access to any products from Johnson & Johnson to test. Did
6 there come a time in 2018 when you obtained one sample, to begin
7 with, from Johnson & Johnson, that they had preserved and they
8 had put in what is known as the Johnson & Johnson Museum?

9 A Yes.

10 THE COURT: Let's take a break-in five minutes. Is
11 that a good time for you?

12 MR. BLOCK: This is a fine break, your Honor if you
13 are ready.

14 THE COURT: See you in ten minutes.

15 MR. BLOCK: Thank you.

16 THE COURT OFFICER: All rise. Jury exiting.
17 (Whereupon, the jurors exited the courtroom and
18 went into the jury room for a ten-minute recess.)

19 THE COURT OFFICER: All rise. Jury entering.
20 (Whereupon, the jurors entered the courtroom and
21 were properly seated in the jury box.)

22 THE COURT: Thank you very much. Please be seated.

23 Q Dr. Longo, I would like to turn to testing that you did
24 on Johnson & Johnson's baby powder products that came from
25 Johnson & Johnson. And I'm going to show you what's been marked

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1 for identification as Plaintiff's Exhibit 314 and 316.
2 (Whereupon the documents were handed to the witness.)
3 Q Okay.
4 All right, Dr. Longo, in terms of products that were
5 from Johnson & Johnson, did you first test a product from 1978.
6 This container that the jury can see here?
7 A Yes, sir.
8 Q And does that container say "purest protection"?
9 A It does.
10 Q And in this report, dated February 16, 2018, how many
11 samples did you take from that container?
12 A We received two samples taken from the same container.
13 Q And did you find anthophyllite asbestos in the samples
14 from this 1978 Johnson baby powder container that says pure rest
15 protection?
16 A Yes.
17 Q We've looked at a number of pictures from the
18 transmission electron microscope. I would like to ask you now,
19 do we have an SEM, a scanning electron microscope picture, to
20 show the jury from that product, from the sample ID 68233. Can
21 we see an SEM photo there of anthophyllite asbestos?
22 A Yes. That is one of the bundles that we detected.
23 This is one of the anthophyllite solid solutions series that has
24 iron in it.
25 Q What is significant about this SEM photo of

Dr. Longo - Plaintiff - Direct (Mr. Block) Page 1572

1 anthophyllite asbestos in this 1978 container of Johnson's baby
2 powder?
3 A You could see that the structure is composed of
4 multiple individual fibers all parallel to each other, all
5 touching. So this is the classic example of a bundle of
6 regulated asbestos, and because it is a bundle, nobody argues
7 that it's not asbestiform, because you can't break up rocks and
8 form perfectly parallel fibers with each other. This was formed
9 in an asbestiform habit, because it's fibrous and it's a bundle.
10 MR. BROCK: What page is this in the report?
11 MR. BLOCK: We have exhibits. We produced to you
12 Exhibit 315. And do we have the next slide?
13 (Whereupon, a demonstrative aid was shown on the
14 screen.)
15 Q Do we have a number of pictures that you put together
16 where we could see the length of that anthophyllite asbestos and
17 observe --
18 A If you stop it there.
19 Q I don't know if I could do that?
20 A Okay. It's a montage of that entire bundle.
21 Q And what's important about that in terms of the
22 identification of anthophyllite asbestos?
23 A This is -- the source of this is the Vermont mine, and
24 it's -- anthophyllite asbestos is consistently what is found in
25 that mine, and it's one of the regulated asbestos types.

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1 Q And then in October of 2018, did you do a report
2 looking at ten Johnson's baby powder products that were from
3 Johnson & Johnson, preserved by Johnson & Johnson and kept at
4 the Johnson & Johnson Museum?
5 A Yes.
6 Q Were these products all dated?
7 A They were.
8 Q And did these products in this report, did they come
9 from 1967 to 1985?
10 A Yes.
11 Q And so the source of the talc that would be in these
12 containers of Johnson's baby powder would be what?
13 A These would all be from starting in '67, all from the
14 Vermont mine, um, to '85. During that time frame they were
15 using Vermont cosmetic talc.
16 Q Could we see, although the packaging changes a little
17 bit here and there, they all say purest protection with that
18 pink ribbon?
19 A Correct.
20 Q And what were your results in terms of being able to
21 detect asbestos in those ten Johnson & Johnson's baby powder
22 products?
23 A Out of the ten samples, seven were positive for
24 regulated asbestos. So 70 percent of the samples had regulated
25 asbestos present in them.

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1 Q Now, in the earlier test that you did, I think you said
2 you used transmission electron microscopy only?
3 A Correct.
4 Q Did you use the Blount method for testing these ten
5 samples and did you look at it under the transmission electron
6 microscope the polarized light microscope or both?
7 A Both. We followed three methods. The standard TEM
8 method that we've been talking about for a while. We also
9 followed the ISO 22262-1 PLM method, optical microscopy without
10 heavy liquid separation. The TEM was 22262-2, heavy liquid
11 separation TEM, what we've been talking about.
12 And then last one we did was follow Blount's paper that
13 she published in 1991, heavy liquid density for PLM. So we did
14 three different methods.
15 Q Just to be clear. Dr. Blount's preparation method, in
16 the article she published, she used that preparation method, but
17 she paired it with the polarized light microscope; is that
18 right?
19 A That's right.
20 Q And your study of those 30 products we talked about
21 earlier, you paired that preparation method with a TEM
22 microscope; is that right?
23 A Correct. As it turns out the 22262-2 is the exact same
24 method.
25 Q Right, that ISO standard?

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1 A That ISO standard for heavy liquid density.
2 Q And now we get to the analysis of these ten products.
3 And did you use both a TEM and a polarized light microscope,
4 both methods, and also used the Blount method as well?
5 A Correct. All ten samples were analyzed using three
6 different analytical methods. Heavy liquid density TEM, heavy
7 liquid density PLM, Blount method, and the ISO 22262-1 polarized
8 light microscopy, no heavy liquid separation.
9 Q And in terms of the type of asbestos that was found in
10 seven out of these ten containers of Johnson & Johnson baby
11 powder from Johnson & Johnson, what types of asbestos do we have
12 identified by Material Analytical Services?
13 A We found both tremolite, actinolite solid solution
14 series, as well as anthophyllite, depending on which method.
15 Q And I see we have a range of concentrations in terms of
16 fibers per gram. And then the aspect ratios. What about these
17 results is consistent or not with the earlier testing you had
18 done on the 30 containers that have been sent to you by law
19 firms?
20 A Depending on the mine, it's all consistent. In the
21 earlier testing, I think we had one sample that was -- one or --
22 one sample from Vermont, and we found anthophyllite solid
23 solution series for that sample. The rest of them were
24 primarily from either from China or Italy. All the Italy ones
25 were tremolite. So we are finding consistency the same

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1 concentration, some lower, same types of asbestos. It's all
2 consistent.
3 Q So, for example, the jury has seen a reports from
4 Batelle, from the 1950s, finding tremolite in Italian talc, and
5 what type of asbestos were you finding in the products with
6 Italian talc mostly?
7 A Primarily tremolite and a couple of richterite fibers,
8 but primarily tremolite.
9 Q And the jury has seen documents identifying fibrous
10 anthophyllite in the Vermont talc mines, and were you finding
11 anthophyllite asbestos in containers of Johnson's baby powder
12 that used Vermont talc?
13 A Both anthophyllite, as well as tremolite and
14 actinolite. So we are finding the same types of asbestos.
15 Q Let's take a look at the -- since you did polarized
16 light microscopy, let's look at some of that, because we haven't
17 seen pictures of that.
18 Is this an example of an actinolite, tremolite asbestos
19 particle that Material Analytical Services identified by
20 polarized light microscopy using the Blount preparation method?
21 A Yes.
22 Q Can you tell us about this picture and what it shows
23 us?
24 A This is on the dispersion staining, and the polarized
25 light. And you say staining, but there is no stain put on it.

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1 It's actually the light.
2 And when dispersion staining, when you have the
3 particle, which has a similar refractive indices to the medium,
4 you have it in there. In this case we are using 1.605. The
5 light is literally bent around the bundle here. So that's why
6 you have such brightness on the outside.
7 And then this is in parallel. So you can then look at
8 charts and find out what the refractive indices is by the wave
9 length or vibration of light coming through, and the color.
10 So we go -- that's perpendicular -- or parallel, excuse
11 me. And the next one should show it -- this is 90 micrometers
12 long. The individual fibers that are in this bundle, it's a
13 little hard to see with my glass, are approximately about point
14 two to point five. The aspect ratio of the individual fibers in
15 this bundle are all over a hundred to one. So even the criteria
16 of one to 20 to 101. Every one that we have analyzed using
17 polarized light has met that criteria.
18 Q Just for the record, the range of the concentrations of
19 asbestos in the seven out of ten are about 22,000 fibers --
20 about 12,000 fibers per gram all the way up to 63,000 fibers per
21 gram?
22 A By TEM, yes.
23 Q How about one that was identified by PLM only. How do
24 you determine -- do you determine concentration to that?
25 A No the PLM method is by weight percent. So all our PLM

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1 methods which are positive has a weight percent associated with
2 it. That particular one was negative by TEM and positive by
3 PLM.
4 Q Can you explain to the jury, they heard so much about
5 the TEM microscope being the more sensitive analytical tool.
6 How can you explain that in one of the ten samples you found
7 asbestos by PLM but not TEM?
8 A The TEM is very sensitive for a certain range of fibers
9 and bundle size. PLM -- TEM cannot find these really big
10 bundles. You saw it up there. It was almost 90 micrometers
11 long. That does not show up on TEM analysis. It's too big, on
12 the grid on the filter. So there's two different sized ratios
13 here. These very large bundles, as well as the finer smaller
14 individual fibers. TEM is the most sensitive technique, but to
15 analyze these samples you need all three of these if you want to
16 understand what is there and have the best potential for finding
17 positives.
18 PLM looks like a lot more area, a lot bigger sample.
19 It's a needle in a haystack effect. And occasionally that will
20 happen. You'll find it by PLM, but not by TEM. However,
21 percentage-wise, TEM has the highest ratio as positives as
22 compared to the others?
23 Q Let's just may I ask you about a few other pictures?
24 (Whereupon, a demonstrative aid was shown on the
25 screen.)

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1 A So this is the same fiber, same bundle. Now it's in
2 perpendicular dispersion. You notice that it reduces in
3 intensity and goes to kind of a more goldish orange versus the
4 other one which was more brighter. That gives you the
5 indication, okay, it's going to be actinolite, tremolite.
6 Sometimes you get anthophyllite the same dispersion, but you do
7 additional things to ferret those two out.

8 MR. BROCK: For the record, that is 69042. Do you
9 need all the numbers in the middle, also, to identify it, or
10 is it just 001, M69042001BL-001.

11 Q And Dr. Longo, it looks like the very next one is -- is
12 this the same particle asbestos from that sample of Johnson &
13 Johnson baby powder?

14 A Yes. If you go back to the previous one, you'll notice
15 that there seems to be a faint outline around the bottom of that
16 bright area, that bright fiber. You see that bluish outline?
17 That is actually a talc particle.

18 If you go to the next, this has -- they call a
19 retardation plate, where the light vibrating through there, I
20 think it's a 530 nanometers, that talc in this mode will always
21 be this bright blue like this.

22 And then you have the elongation. And you could
23 actually see some of the fibers that are in there better. So
24 that is the elongation which would be positive.

25 Q And Dr. Longo, how do you know like what color it's

Dr. Longo - Plaintiff - Direct (Mr. Block)

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1 asbestos as seen under the polarized light microscope in
2 Johnson's Baby Powder that you tested?

3 A Yes.

4 Q In terms of the patterns of the asbestos and the test
5 that show you that is asbestos, is there any difference about
6 the asbestos that you are finding in Johnson's baby powder and
7 the asbestos you've found when you've done product testing over
8 many decades?

9 A No. It's not -- the type of asbestos in the products,
10 but you'll find these accessory, actinolite, anthophyllite. And
11 mostly where we see anthophyllite was in industrial talcs, which
12 are used in the products and is one of the things we used to ID
13 the products. I could give you an example.

14 Q Okay. Do you have an example?

15 A Yeah. I was afraid to just keep talking.

16 Q Go ahead.

17 A U.S. Gypsum Audocare is an acoustical plaster
18 manufactured by U.S. Gypsum with asbestos, and it had ten
19 percent chrysotile, 60 percent perlite, it had ten percent
20 fibrous talc from the Governor Mines up in New York,
21 international talc. And the signature on that talc was it had a
22 lot of anthophyllite and fibrous. So we would look for that to
23 ID that product. And it had bentonite clay. So we would use it
24 as part of the ID process, because none of the manufacturers
25 used fibrous talc from the Governor mine in New York.

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1 supposed to be. Where -- how do you know that?

2 A First you have to have a very experienced analyst and
3 see they are using a refractured fluid of 1.605, and for these
4 different things you actually have a chart of wavelengths, light
5 wavelengths for these different refractured indices you are
6 putting in there. And you could actually pick it off the chart.

7 It takes a lot of experience do this analysis, but that
8 is the common protocol.

9 MR. BROCK: Go back. I want to make sure I have it
10 for the record.

11 MR. BLOCK: It was the same particle.

12 MR. BROCK: 042 has the purple, blue.

13 (Whereupon, a demonstrative aid was shown on the
14 screen.)

15 Q The next one, the same particle but just different
16 color?

17 A It's same particle. Now we are in the crossed polars
18 where we have the polarizer in and the analyzer. Polarizer is
19 going this way and the analyzer is this way, so you are reducing
20 a lot of straight light going everywhere, like polarized
21 sunglasses. So it's only coming in one direction. And it shows
22 you very clearly how if you look at that structure, the goldish
23 yellow structure which has been identified as actinolite,
24 tremolite, you could see the individual fibers in that bundle.

25 Q So those pictures that we just looked at, is that

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1 Q Was the anthophyllite asbestos you found in that
2 product essentially the same as the anthophyllite asbestos you
3 found in Johnson's baby powder?

4 A We didn't identify it any different way back in the
5 '90s when we were doing that than we are doing today doing
6 product ID.

7 It had the -- it met the criteria for length,
8 refraction, chemistry, parallel sides. We were doing the exact
9 same thing in the '90s, all through the '90s, that we are doing
10 today with the cosmetic talc. We are identifying asbestos.

11 Q And over the years have you found tremolite asbestos as
12 a contaminant of chrysotile asbestos?

13 A It's an accessory mineral.

14 Q When you find tremolite asbestos as a contaminant in
15 chrysotile asbestos, is it essentially the same as the tremolite
16 asbestos that you are finding in Johnson & Johnson's talcum
17 powder products?

18 A The chemistry, everything is the same. It meets the
19 counting criteria.

20 Q Okay.

21 And we don't have to go through all of these, but do we
22 have some pictures of anthophyllite asbestos in the Johnson's
23 baby powder containers M69042-001-004. Can you see that there?

24 A Yes.

25 Q And is that anthophyllite asbestos in Johnson's baby

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1 powder?
2 A It is. It's a fiber -- it has an aspect ratio of ten
3 to point two. So that would be an aspect ratio of 50 to one.
4 So it clearly meets -- it equals or meets the five to one
5 counting rule when it's 50 to one.

6 Q All right. I don't want to go through all the
7 pictures, but let me ask you about this one, M69042-002. You
8 are testing from another Johnson & Johnson baby powder container
9 that came from Johnson & Johnson.

10 Can you explain to us this photograph and how there is
11 an arrow, it says talc, and an arrow that says anthophyllite?

12 A Yes, this was one where the analyst found
13 anthophyllite, and then when I was reviewing the data I said,
14 "What's this?"

15 "That is talc."

16 Well, prove it, and he went back and proved it. So we
17 have two talc fibers aligning the anthophyllite fiber, so the
18 dark one is anthophyllite and the lighter is talc fibers.

19 Q So this fiber that's below the darker fiber, is that
20 talc?

21 A It is.

22 Q And the one above is anthophyllite?

23 A Correct.

24 Q And you're finding that in Johnson's baby powder?

25 A We found fibrous talc in a number of these samples.

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1 Q And what is the difference between the talc fiber and
2 anthophyllite asbestos in the Johnson's baby powder?

3 A Well, one is a regulated asbestos and the other one is
4 not. Talc has pretty much the exact same chemistry as
5 anthophyllite so that you have to do a little -- so to
6 distinguish them apart, one, you do defractions, also known as
7 selected area electron defraction, where initially you start out
8 -- your asbestos fiber is perpendicular, laying zero degrees on
9 the TEM. You get a defraction pattern. Then you tilt the whole
10 goniometer, or the whole sample, until you get a second
11 defraction pattern, meaning another orientation of the crystal
12 and it will be different.

13 (Continued on the next page.)
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1
2 A. Talc on the other hand, you get this you sudo
3 hexagonal pattern looking thing. And if you rotate it, it
4 never changes. It stays the same time after time. That's
5 how we distinguish between the two.

6 MR. BROCK: I'm sorry. Could I see the one?

7 MR. BLOCK: Which one?

8 MR. BROCK: That's fine. I'll look at them
9 later.

10 Q. Let's go to another subject, which is have
11 you reviewed the 1991 article by Dr. Alice Blount, that's
12 in evidence as Exhibit 11 and 12, have you reviewed that
13 to determine whether what you found in Johnson's Baby
14 Powder is consistent with Dr. Blount's findings?

15 A. Yes.

16 Q. And have you also reviewed the key, the
17 handwritten key which is Exhibit 12, which identifies
18 Sample I as Windsor J & J, JBP, have you reviewed that?

19 A. I have.

20 Q. Have you reviewed another key that Dr. Blount
21 September to Cyprus that identifies sampling Windsor,
22 Vermont baby powder?

23 A. I have reviewed that.

24 Q. And if you look at Sample I that's identified
25 as Johnson's Baby Powder and those keys, how if at all are
26 your findings of asbestos consistent or inconsistent with

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1 what Dr. Blount found in 1991?

2 A. She found primarily tremolite asbestos as she
3 called it. Most of the Vermonts we see are anthophyllite
4 with tremolite, actinolite. We do have one of the samples
5 close to that year that was all tremolite, exact same
6 thing she was finding.

7 Q. Dr. Blount found a long, thin tremolite
8 asbestos fibers that she calls needles and fibers. How
9 does that compare to what you found?

10 A. That's what we found. And her concentrations
11 are similar to what we're seeing. She reported it in
12 particles per milligram. We reported in fibers per gram.
13 And the only difference there is it's another unit. So,
14 if you multiply all those results by a thousand, you can
15 then compare hers fibers per gram to ours. So she had a
16 range of for I, 102,000 up to 341,000 asbestos fibers and
17 bundles of tremolite.

18 Q. And Dr. Blount did an analysis where she
19 charted the aspect ratios of the tremolite asbestos she
20 found, and she compared it to a publication by Campbell
21 from 1977. Is that right?

22 A. Yes, sir.

23 Q. And did Dr. Blount conclude from that that
24 Sample I was tremolite asbestos?

25 A. She did.
26

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1 Direct-Longo-Block
2 Q. And have you, yourself, performed an aspect
3 ratio distribution calculation of the 304 asbestos
4 particles that the Material Analyst Service found in that
5 first 30 product test and charted it against Dr. Blount,
6 the 1977 Campbell article and the NIST tremolite amphibole
7 asbestos dimensions of that asbestos?
8 A. Yes, we did.
9 Q. All right. So, if we could follow this now.
10 Blount, okay, it says "Blount Sample I", is that in black?
11 A. Yes.
12 Q. All right. And then Campbell, which appears
13 in the article, she charted hers against Campbell, is that
14 in blue?
15 A. That's the blue one.
16 Q. Now we have black and blue (gesturing).
17 A. And that is what he called tremolite
18 asbestos.
19 Q. Okay. And then we have the NIST tremolite
20 amphibole asbestos. Is that the aspect ratio distribution
21 in blue for that one?
22 A. Correct.
23 Q. Red is what?
24 A. Red is all sizes that we found in -- in this
25 report (indicating). Not only the greater than five, but
26 we also went back and analyzed them to get all the sizes,

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1 Direct-Longo-Block
2 the ones we normally don't report, less than five to one,
3 so that we could compare apples to apples. And so the red
4 goes -- The red line is all these particles all sizes that
5 still had the chemistry of tremolite. Still had the
6 crystalline structure of tremolite. And we look at where
7 we have our highest peak. All of them, mine, RMAss, RIST,
8 what Blount found in that 1990 sample off the shelf of
9 Johnson's Baby Powder as well as Campbell's data showing
10 this is the average aspect ratio of asbestos tremolite,
11 they all line up.
12 Q. Okay. And if we follow the X axis and the Y
13 axis, let me ask you if a few things are true. Is it true
14 that in all of them, approximately 30 to 40 percent of the
15 aspect ratio of the asbestos is at least ten to one?
16 A. Correct.
17 Q. All right. And then if we go to 20 to one,
18 it looks like between 20 and 30 percent of each has aspect
19 ratios of 20 to one, is that right?
20 A. Correct.
21 Q. And I think Dr. Blount showed in her study
22 that if it was not asbestos, you would see the peak over
23 here (gesturing), in the upper left, is that right?
24 A. Correct. What she called cleavage fragments.
25 The 70 percent of what she called cleavage fragments had
26 aspect ratios about one to one to two. So, it was chunks

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2 not fibers.
3 Q. Now is this sort of aspect ratio distribution
4 graphing is this required by AHERA, the AHERA accounting
5 protocol method?
6 A. No.
7 Q. All right. Why do you do it anyway?
8 A. Because I was interested to see how our
9 results compared to Dr. Blount's results and compared to
10 Campbell's results as compared to NIST to try to
11 understand how folks were saying this is not asbestos.
12 It's not asbestiform. And the thing about it is
13 tremolite, anthophyllite by their materials and their
14 chemistry are brittle. They are not flexible. These
15 materials are milled. So, they are breaking up. And all
16 these samples have all been milled, either the Johnson &
17 Johnson material, Blount's material, Campbell ground his
18 and NIST ground theirs. So, it all matches.
19 Q. Dr. Longo, let me show you another part of
20 Exhibit 4, which is in evidence. This is Johnson &
21 Johnson's TEM method TM 7024. And I want to ask you about
22 a section that says that the detection of five or more
23 asbestiform minerals of one variety in an analysis
24 constitutes a quantifiable level of detection. Do you see
25 that?
26 A. I do.

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1 Direct-Longo-Block
2 Q. The jury has seen some testing that uses the
3 term nonquantifiable. Dr. Longo, in your experience in
4 testing materials for asbestos, do you have a number of
5 asbestos fibers that you have to find before you report it
6 or do you have this five fiber minimum rule that's in TM
7 number 7024?
8 A. Well, we do have a number we have to find
9 before we report it.
10 Q. What's that number?
11 A. One.
12 Q. Why are you reporting everything you find
13 when you're testing a material for asbestos?
14 A. Because that's how you do this. You should
15 always report what you find. You can argue about it later
16 that it's asbestos or nonasbestos, but you should report.
17 All these methods tell you to report it, what you have.
18 Not not report it. The 22262 method ISO method says it's
19 detection limit is one fiber or one bundle. You always
20 report it.
21 Q. Throughout your career analyzing materials
22 for asbestos for over 30 years, have you been reporting
23 what you find?
24 A. Fine. It's either non detect one or more.
25 Q. Dr. Longo, it also says here in the Johnson &
26 Johnson method that you can only spend two hours analyzing

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2 a sample, a talc sample for asbestos by TEM. Is that
3 acceptable in your opinion?
4 A. No. You can't do an adequate analysis in two
5 hours. We look at a hundred grid openings. If there is
6 nothing present, meaning it's a non detect, it still takes
7 four to five hours of transmission electron microscopy
8 time to do a thorough analysis. That one we looked at
9 that was 14 million, that analysis took three days. So,
10 we do not -- we do not tell the analyst you only get this
11 much time to do this. We want a thorough analysis and a
12 careful analysis.
13 Q. Dr. Longo, have you being familiar with
14 Johnson & Johnson's testing method 7024 and understanding
15 the rule in that testing method that it could be reported
16 at nonquantifiable unless you detect at least five
17 asbestos fibers of the same variety, have you calculated
18 the detection limit for Johnson & Johnson's TEM testing
19 methods 7024?
20 A. I have.
21 Q. And what is it?
22 A. For a single fiber it's approximately
23 12,000 -- Excuse me -- 12 million fibers or bundles per
24 gram to find one fiber. So, you have to have at least
25 that concentration to find one fiber. Now for them to
26 make it quantifiable, you have to have five of those

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2 fibers. So, if you take five of those fibers, it has to
3 be all tremolite. So five of those, if you have four, you
4 get approximately 56 million. It has to be higher than 56
5 million fibers and bundles per gram for you to say that is
6 countable. Now, it's probably never happened, but if you
7 have four tremolite --
8 MR. BROCK: Your Honor, it's never happened,
9 I object to it. He said it probably never happened.
10 THE COURT: Sustained.
11 Q. Well, in calculating a limit of detection,
12 are you looking at all possibilities?
13 A. Yes. If you have four tremolite --
14 THE COURT: That would be yes.
15 THE WITNESS: Yes.
16 Q. Okay. If you calculated the limit of
17 detection for Johnson & Johnson TEM 7024 test method,
18 assuming that there were four asbestos fibers of four
19 different varieties found --
20 MR. BROCK: Objection. He's assuming
21 something that the expert has said is not probable.
22 THE COURT: Finish your question.
23 Q. Have you calculated that detection limit?
24 A. Yes.
25 Q. What is it?
26 MR. BROCK: Same objection. He had an

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2 assumption in the question that the expert has said
3 is not probable.
4 THE COURT: Please repeat his original
5 question.
6 (Whereupon the above-requested testimony was
7 read back.)
8 THE COURT: Overruled.
9 A. I have.
10 Q. And what is that detection limit?
11 A. A quarter of a billion fibers per gram.
12 Q. Just to be clear. If we start with tremolite
13 asbestos, which you have found in Johnson's Baby Powder,
14 according to Johnson & Johnson's method, if they find four
15 tremolite asbestos fibers in a sample, what would the
16 concentration of asbestos in that sample be if you find
17 four tremolite asbestos fibers?
18 A. Fifty-six million.
19 Q. Okay. But under the Johnson & Johnson test
20 method, would that be nonquantifiable?
21 A. According to their method, yes.
22 Q. You have found actinolite asbestos in
23 Johnson's Baby Powder, correct?
24 A. Yes.
25 Q. And if you found four tremolite and four
26 actinolite asbestos fibers in Johnson's Baby Powder, what

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2 what would the concentration be?
3 MR. BROCK: Your Honor, again there is an
4 assumption in the question that the expert has said
5 is not probable. So, I object to it on that basis.
6 Now adding different fibers, different hypotheticals.
7 MR. BLOCK: I think we have covered it, your
8 Honor. I can move on.
9 Q. Have you calculated --
10 THE COURT: Sustained.
11 Q. Are you familiar with --
12 THE COURT: We're almost done though.
13 MR. BLOCK: Sure. Can I finish this slide,
14 your Honor?
15 THE COURT: Yes. Please don't go past 4:30.
16 MR. BLOCK: I certainly will not.
17 THE COURT: Thank you.
18 Q. Are you familiar with the work of Dr. Matthew
19 Sanchez of the RJ Lee Group who has analyzed samples of
20 Johnson's Baby Powder in litigation?
21 A. Yes.
22 Q. And have you looked at Dr. Sanchez's test
23 method for TEM analysis and analyzed what the detection
24 limit is?
25 A. Yes.
26 Q. What is the detection limit of Johnson &

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2 Johnson's expert witness, Dr. Matthew Sanchez, what's the

3 detection limit of his method for detecting asbestos in

4 Johnson's Baby Powder?

5 A. It originally was 14,000,500. The last set

6 of analysis I've looked at, they have increased their grid

7 openings. It looks like it's now about approximately 1.5

8 to 2 million fibers per gram.

9 Q. So, it used to be 14,500,000. And then they

10 increased the number of grid openings they were looking at

11 and now it is what?

12 A. Approximately 1.5 to 2 million. 1.5 million

13 to 2 million.

14 Q. All right. I think earlier you said that the

15 Material Analytical Services TEM method, with heavy liquid

16 separation, I think you said around 3,500 or 3,000?

17 A. That's what we're now approaching.

18 Ultimately our goal is to get down to approximately a

19 hundred.

20 Q. Can you explain to the jury why your limit of

21 detection for analyzing Johnson's Baby Powder or talc for

22 the presence of asbestos is so much lower than the Johnson

23 & Johnson's method and Dr. Sanchez's method?

24 A. Actually it's so much higher. It's kind of

25 reverse for one simple reason. We're using the heavy

26 liquid separation method published by Alice Blount in 1990

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2 and looked at by Johnson & Johnson in the early 1970s.

3 It's nothing magical. It's not the Longo or MAS heavy

4 liquid method. It's just standard protocol.

5 MR. BROCK: Objection. Move to strike. Way

6 beyond the question.

7 MR. BLOCK: Your Honor, that was the answer.

8 Could we have a read back? It was responsive.

9 THE COURT: All right. Let's have a read

10 back with the question please and the answer.

11 (Whereupon the above-requested testimony was

12 read back.)

13 THE COURT: That's it. Right to that point.

14 Not a word past it. Strike it from your minds.

15 MR. BLOCK: All right.

16 THE COURT: I'm asking you, doctor, again,

17 don't add to your answer, please.

18 THE WITNESS: I'm sorry, your Honor. I get

19 carried away. I understand.

20 THE COURT: There is no need to apologize.

21 Q. Dr. Longo, so the detection limit, yours

22 being around 3,000 or 3,500 fibers per gram, compared to

23 Johnson & Johnson 7024 method, whose detection limit is

24 more sensitive or can better able -- can better identify

25 asbestos in talc?

26 A. Well, the heavy liquid method separation. So

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2 the standard separation that we're using.

3 Q. Okay. And just to be clear. Johnson &

4 Johnson's TEM test method 7024 used the heavy liquid

5 separation method?

6 A. I'm sorry?

7 Q. Does the Johnson & Johnson TEM --

8 A. It does not.

9 Q. It does not?

10 A. I thought you said did they.

11 THE COURT: Why don't you repeat your

12 question.

13 Q. Just a few more questions for today, Dr.

14 Longo. Does the Johnson & Johnson 7024 TEM test method

15 use the heavy liquid separation method?

16 A. No, it doesn't.

17 Q. Does it use any concentration technique?

18 A. No.

19 Q. Does Dr. Sanchez's method use the heavy

20 liquid separation method?

21 A. It does not.

22 Q. Does it use any concentration technique?

23 A. No.

24 Q. And is that the primary reason why your

25 method is so much better able to identify asbestos in

26 talc?

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2 MR. BROCK: Asked and answered. Leading.

3 Objection.

4 THE COURT: Sustained as to the very last

5 question.

6 MR. BLOCK: Okay.

7 Q. Just to sum it up, what if anything do you

8 attribute the greater sensitivity of your method in

9 testing talc for asbestos?

10 MR. BROCK: Asked and answered several times.

11 Objection.

12 THE COURT: You may answer that one.

13 A. Removing the talc and concentrating the

14 amphibole asbestos so that we don't have to look at huge

15 numbers of grid openings.

16 MR. BLOCK: Those are all the questions I

17 have today, your Honor. It's 4:30. Thank you.

18 THE COURT: Thank you very much. Members of

19 the jury, you will now be excused until tomorrow

20 morning at 9:30. I really want to emphasize once

21 again that if you happen to hear anything on TV or

22 radio or in the newspaper or on the internet about

23 this case or anything related to this matter, you

24 must immediately disassociate yourselves from it. If

25 you've seen or heard anything, please report that

26 immediately to the Court. Keep an open mind. See

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2 you tomorrow morning. Thank you so very, very much.
3 COURT OFFICER: All rise. Jury exiting.
4 (Whereupon the jury panel departed the
5 courtroom.)
6 THE COURT: Thank you so much. See you
7 tomorrow.
8 (Whereupon the proceedings were adjourned to
9 February 26, 2019 at 9:30 a.m.)
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Exhibit 82

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION: MIDDLESEX COUNTY
DOCKET NO. MID-2912-17AS
APPELLATE DOCKET NO.

RICARDO RIMONDI AND PILAR RIMONDI,)
)
)
 Plaintiffs,)
) TRANSCRIPT
 v.) OF
) TRIAL
 BASF CATALYSTS LLC, et al.,)
)
 Defendants.)
)
 _____)
)

Place: Middlesex County Courthouse
56 Paterson Street
New Brunswick, New Jersey 08903

Date: Tuesday, March 5, 2019
(Volume 1 of 2)
(Pages 1 - 200)

BEFORE :

HON. ANA C. VISCOMI, J.S.C. and JURY

TRANSCRIPT ORDERED BY:

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<p style="text-align: right;">2</p> <p>1 APPEARANCES:</p> <p>2 MARK A. LINDER, ESQ.</p> <p>3 JOSEPH N. COTILLETTA, ESQ.</p> <p>4 LEYDYLUZ SYMPHORIEN-RESTREPO, ESQ.</p> <p>5 MONICA COOPER, ESQ.</p> <p>6 THE LANIER FIRM</p> <p>7 Attorneys for Plaintiffs</p> <p>8 ALLISON BROWN, ESQ.</p> <p>9 WEIL, GOTSHAL & MANGES LLP</p> <p>10 -and-</p> <p>11 MORTON DONALD DUBIN, II, ESQ.</p> <p>12 KEVIN HYNES, ESQ.</p> <p>13 ORRICK, HERRINGTON & SUTCLIFFE LLP</p> <p>14 Attorneys for Defendants,</p> <p>15 Johnson & Johnson, and</p> <p>16 Johnson & Johnson Consumer, Inc.</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">4</p> <p>1 EXHIBITS IDENT. EVID.</p> <p>2 Plaintiff's 143 CV 9</p> <p>3 Plaintiff's MAS entrance photo 25</p> <p>4 160.2</p> <p>5 Plaintiff's Dr. Longo ad 41</p> <p>6 161.12</p> <p>7 Plaintiff's Photo 46</p> <p>8 161.6</p> <p>9 Plaintiff's Photo 46</p> <p>10 161.5</p> <p>11 Plaintiff's Photo 46</p> <p>12 160.1</p> <p>13 Plaintiff's 263 Grid photo 46</p> <p>14 Plaintiff's 7275 J4-1 method 64</p> <p>15 Plaintiff's 5781 Johnson & Johnson's 71</p> <p>16 TEM 7024 method, 1995</p> <p>17 Plaintiff's 8410 Chart 83</p> <p>18 Plaintiff's 60 Dr. Blount's article 88</p> <p>19 161.8 11/14/2018 report 97</p> <p>20 161.10 1/15/19 report 97</p> <p>21 161.1 January 2018 report 97</p> <p>22 161.7 2/1/19 report 97</p> <p>23 161.9 3/11/18 report</p> <p>24 161.10 A Images out of 161.10 103</p> <p>25 161.10 B Images out of 161.10 103</p> <p>161.10 C Images out of 161.10 103</p> <p>161.10 D Images out of 161.10 103</p> <p>Plaintiff's 936 Environmental 111</p> <p>Protection Agency Part</p> <p>763 Asbestos</p> <p>D-11038 MAS TEM Coefficient of 170</p> <p>Variation for</p> <p>Tremolite</p> <p>Anthophyllite in Talc:</p> <p>Quality Control Study</p> <p>D-12248 Photo 174</p> <p>D-9053 Sample of non-asbestos 175</p> <p>tremolite</p> <p>D-8019.0001 Determination of 185</p> <p>Asbestos Minerals in</p> <p>Windsor 66 Talc By a</p> <p>Transmission Electron</p> <p>Microscope</p> <p>D-11249 A Document 199</p> <p>Plaintiff's 24 1975 Johnson & Johnson 217</p> <p>letter</p> <p>Plaintiff's 8150 1975 letter 229</p> <p>C-1 Juror question 232</p> <p>C-2 Juror question 232</p>
<p style="text-align: right;">3</p> <p>1 INDEX</p> <p>2 WITNESSES DIRECT CROSS REDIRECT RECROSS</p> <p>3 FOR THE PLAINTIFF:</p> <p>4 WILLIAM LONGO 7 136 210</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">5</p> <p>1 COURT OFFICER: Jury's entering.</p> <p>2 (Jury enters.)</p> <p>3 THE COURT: Good morning. Please be seated.</p> <p>4 Make sure cell phones are turned off.</p> <p>5 Counsel, you may be seated as well. You're</p> <p>6 welcome.</p> <p>7 Today is March 5, 2019. We are here in the</p> <p>8 trial of the matter of Ricardo and Pilar Rimondi versus</p> <p>9 Johnson & Johnson, Docket Number 2912-17.</p> <p>10 Could I have appearances, please, on behalf</p> <p>11 of the plaintiffs.</p> <p>12 MS. COOPER: Yes, your Honor. Good morning,</p> <p>13 members of the jury. Monica Cooper on behalf of the</p> <p>14 plaintiffs.</p> <p>15 MR. LINDER: Good morning, everyone. Mark</p> <p>16 Linder, also on behalf of the plaintiffs.</p> <p>17 MR. COTILLETTA: Good morning, everyone. Joe</p> <p>18 Cotilletta on behalf of the plaintiffs.</p> <p>19 MS. SYMPHORIEN-RESTREPO: Hello, everyone.</p> <p>20 My name is Leydyluz Symphorien-Restrepo, on behalf of</p> <p>21 the plaintiffs.</p> <p>22 THE COURT: And on behalf of the defendants</p> <p>23 Johnson & Johnson.</p> <p>24 MR. DUBIN: Hello. Morton Dubin, on behalf</p> <p>25 of Johnson & Johnson. Trying to remember where I am.</p>

<p style="text-align: right;">6</p> <p>1 MS. BROWN: Good morning, everyone. Alli 2 Brown on behalf of Johnson & Johnson. 3 MR. HYNES: Kevin Hynes on behalf of Johnson 4 & Johnson. 5 THE COURT: Mr. Hynes, you're just so 6 courteous to Ms. Brown. 7 MS. BROWN: I know, isn't he? I know. 8 THE COURT: So, members of the jury, as you 9 may recall, we are in the plaintiffs' case. We 10 completed the testimony of the corporate representative 11 yesterday. Plaintiffs may call their next witness. 12 MS. COOPER: Your Honor, the plaintiffs call 13 Dr. William Longo. 14 Good morning. 15 THE WITNESS: Good morning. Good morning, 16 your Honor. 17 THE COURT: Good morning. 18 COURT OFFICER: Place your left hand on the 19 bible. State your full name, spell your last. 20 THE WITNESS: William Edward Longo, 21 L-o-n-g-o. 22 W I L L I A M E D W A R D L O N G O, sworn. 23 COURT OFFICER: Keep your voice up. You're 24 being recorded. 25 THE WITNESS: Yes, ma'am.</p>	<p style="text-align: right;">8</p> <p>1 it, see how it behaves, strengths, its weaknesses and 2 so on. 3 Q I like roadmaps. It helps us stay on track 4 here. So I made you a roadmap. 5 First of all, is that you? 6 A That's me. 7 Q And where are you in that picture? 8 A I'm sitting in our laboratory of MAS, and that's 9 one of our new field emission scanning electron 10 microscopes. 11 Q I've called you the asbestos microscopist. 12 What is that? 13 A That would be a microscopist or somebody who runs 14 a, we call them tools, analytical microscope or of any 15 sort, and to analyze the sample for asbestos. 16 Q So this is our stops along our roadmap. 17 Okay? I'm first going to talk about you, the asbestos 18 microscopist, and then we're going to talk a little 19 bit -- we've heard a lot of complicated terms here, so 20 I want you to kind of break those down. We're going to 21 talk about testing 101. Okay? Then we're going to 22 talk about good testing and bad testing. And if we 23 make the right, the good testing we don't end up at 24 this dead end and we get to your test results. Okay? 25 A That's fine.</p>
<p style="text-align: right;">7</p> <p>1 MS. COOPER: If I could get plaintiffs' Elmo 2 one, please. 3 DIRECT EXAMINATION BY MS. COOPER: 4 Q Good morning, Dr. Longo. 5 A Good morning. 6 Q Could you first just tell us why you are 7 here? 8 A To testify about our research and analysis of 9 Johnson & Johnson's cosmetic talc. 10 Q Okay. Who are you? 11 A My name is Bill Longo. I'm from Cumming, Georgia. 12 Not from Cumming, Georgia, but that's where I live, 13 which is one of the many suburbs that are around 14 Atlanta. 15 Q You said that you tested the products in this 16 case, Johnson & Johnson Baby Powder? 17 A Yes, ma'am. 18 Q Can you tell me what exactly is it that you 19 do? 20 A I'm a material scientist. I'm the president of a 21 company called Materials Analytical Service, or MAS, 22 and we're a research analytical consulting laboratory, 23 so we work on all kinds of interesting things. And as 24 a material scientist one of the things that I do is how 25 to characterize any type of material to see what's in</p>	<p style="text-align: right;">9</p> <p>1 Q I want to talk to you a little bit about what 2 I call the name game. And finally we're going to get 3 to Mr. Rimondi's exposure. 4 A Okay. 5 Q Are you prepared to talk about each of those 6 kinds of areas? 7 A Yes, I am. 8 Q So, first of all, let's learn a little more 9 about you. I know you gave me kind of a general 10 overview, but I've got your CV here and I want to talk 11 to you a little bit about it. 12 MS. COOPER: Plaintiffs, at this time, offer 13 Plaintiff's 143. I'll hand that over to defense 14 counsel. 15 THE COURT: Are you offering it, is that the 16 CV? 17 MS. COOPER: Yes, your Honor. 18 THE COURT: Are you offering it into 19 evidence? 20 MS. COOPER: I offer it for demonstrative 21 use. 22 MR. DUBIN: I have no objection for 23 demonstrative use. 24 THE COURT: Absolutely. 25 MS. COOPER: Your Honor, may I approach?</p>

3 (Pages 6 to 9)

<p style="text-align: right;">10</p> <p>1 THE COURT: Absolutely.</p> <p>2 BY MS. COOPER:</p> <p>3 Q Dr. Longo, I've got a copy here of your CV,</p> <p>4 and I want to talk with you about a few areas of this</p> <p>5 so we get a general idea about who you are. Okay?</p> <p>6 A Sure.</p> <p>7 Q So first of all, can you tell me what you got</p> <p>8 your bachelor's degree in first?</p> <p>9 A I received my bachelor's in microbiology with a</p> <p>10 minor in chemistry.</p> <p>11 Q That's what we see here. Why did you want to</p> <p>12 go into microbiology?</p> <p>13 A 'Cause it was a science field and my ultimate goal</p> <p>14 was to get in veterinarian school.</p> <p>15 Q We heard from Dr. Brody earlier last week</p> <p>16 he's into zoology. You were thinking about</p> <p>17 veterinarian school?</p> <p>18 A Sadly, I didn't get in.</p> <p>19 Q Fair enough. So then what did you do after</p> <p>20 that?</p> <p>21 A Went to plan B, which was to go to graduate school</p> <p>22 in material science and engineering. Didn't start out</p> <p>23 that way, but that's where I ended up, and then</p> <p>24 proceeded from there.</p> <p>25 Q Can you tell us what exactly, when you say</p>	<p style="text-align: right;">12</p> <p>1 The result is me. You can think about when</p> <p>2 soda cans used to be a steel can with a seam down the</p> <p>3 side, it was a material scientist who came up with the</p> <p>4 right mixture of aluminum copper, aluminum alloy, to</p> <p>5 make your current cans that we see, made in two pieces,</p> <p>6 and it was cheaper to make and easier to recycle.</p> <p>7 On the ceramic side, it was a material</p> <p>8 scientist who developed the ceramic heat shields for</p> <p>9 the space shuttle.</p> <p>10 The last thing that material scientists do is</p> <p>11 what I call forensic engineering where something has</p> <p>12 gone wrong and a product has failed or there's a</p> <p>13 problem on a manufacturing line. Material scientists</p> <p>14 are really good at tracing down why did it break or why</p> <p>15 is there a corrosion problem or why is the film on the</p> <p>16 glass on a high-rise starting to discolor. And we do a</p> <p>17 lot of that.</p> <p>18 So we can tell you where materials work and</p> <p>19 don't work because of temperature or stress or, and</p> <p>20 we're sort of the go-between all of the other</p> <p>21 engineering groups. The civil engineer and the</p> <p>22 mechanical engineer building a bridge will get involved</p> <p>23 with a material scientist, what is the newest alloys</p> <p>24 and the strengths and the concrete, et cetera. So we</p> <p>25 sort of know a little bit about a lot of different</p>
<p style="text-align: right;">11</p> <p>1 material science, what is that?</p> <p>2 A It's an engineering field that literally studies</p> <p>3 materials, and these materials are typically made up of</p> <p>4 things like metal or metallurgy, ceramics or minerals</p> <p>5 like asbestos, polymers or plastics.</p> <p>6 And then an area I spent a lot of time in</p> <p>7 graduate school is biomaterials. These would be</p> <p>8 devices that are implanted into the body such as a hip</p> <p>9 replacement or an interocular lens if you have a</p> <p>10 cataract that needs to be removed and replaced or an</p> <p>11 artificial knee.</p> <p>12 And as a material scientist we try to design</p> <p>13 these types of devices, the biomaterials where, one,</p> <p>14 they can stand up to the riggers of being in the body,</p> <p>15 and two, not cause any adverse reactions inside the</p> <p>16 body.</p> <p>17 Material scientists also develop new</p> <p>18 materials. All the semiconductor advances over the</p> <p>19 last 20 years where they're getting the memory up</p> <p>20 higher and the chip smaller, they have to go to more</p> <p>21 exotic types of materials, it's material scientists who</p> <p>22 work with the electrical engineers to come up with</p> <p>23 better and better materials to withstand the heat</p> <p>24 generated. Most of your CEOs in semiconductor</p> <p>25 manufacturing companies are material scientists.</p>	<p style="text-align: right;">13</p> <p>1 areas.</p> <p>2 Q We could already tell that you love it.</p> <p>3 A It's fun.</p> <p>4 Q So you went on, you said you got your Ph.D.,</p> <p>5 I see here, in material scientist from University of</p> <p>6 Florida?</p> <p>7 A That is correct.</p> <p>8 Q So can you tell me where you work now?</p> <p>9 A I work for a company call Materials Analytical</p> <p>10 Services.</p> <p>11 Q And we can see the role here. I see you're</p> <p>12 president. Can you tell us a little bit about what</p> <p>13 that is?</p> <p>14 A Well, MAS has a facility in Suwanee, Georgia,</p> <p>15 another suburb outside of Atlanta, and it's a 20,000</p> <p>16 square foot laboratory. And we do everything from</p> <p>17 routine analysis of bulk samples for either asbestos or</p> <p>18 heavy metals or potential organic contaminants, to</p> <p>19 actually working with companies to help solve a</p> <p>20 problem.</p> <p>21 We have a number of scientists in personnel</p> <p>22 that work there. Currently I think our staff is 42</p> <p>23 individuals. We have other material scientists like</p> <p>24 myself. We have organic chemist, inorganic chemist</p> <p>25 geologist, industrial hygienist, certified industrial</p>

14	16
1 hygienist, microbiologist, biologist, physicist, 2 microscopists that specialize in both optical 3 microscopy as well as transmission electron microscopy 4 as well as scanning electron microscopy. 5 And we get involved in things that go wrong 6 and why. And literally when we get a project where 7 something has failed and we want to understand why, we 8 have a conference table, we sit the various scientists 9 down and we go what do you think, what do you think, 10 what do you think. Come up with a potential hypothesis 11 and test for it. As well as routine analysis for 12 certifications. 13 Q When did you start that company? 14 A In February of 1988 we opened the door. 15 Q We have down here September. Is that kind of 16 when you started getting it together, did you open the 17 doors in '88? 18 A September is when MAS, our Materials Analytical 19 Service, was incorporated, and then we had to build a 20 lab. 21 Q Fair enough. You need a building, right? 22 Got down here Ph.D., material scientist. 23 I want to talk to you a little bit about 24 professional associations that you're part of. So, 25 last page here. Pretty long here. But the one I	1 American Society For the Testing of Materials. I think 2 sometimes we hear about it as ASTM. Could you tell me 3 what that is? 4 A ASTM, I think they've changed the name to 5 International organization. It is a standards 6 organization in which they probably have the most 7 standards. When I say standards, it's really a recipe 8 for doing any particular type of testing. And you want 9 standards that people follow so that if lab A does an 10 analysis to a particular standard and lab B does the 11 analysis to that same standard, you can look at the 12 results and compare them versus lab B doing a different 13 type of test. But you cannot compare results. 14 So they have thousands and thousands of 15 standards. Everything from the standard for a door on 16 a cabinet on how many times it can be opened and closed 17 before you think there will be a failure of the hinge. 18 They have standards for the strength of concrete. 19 Again, we'll go back to the bridge. The engineer would 20 specify a particular strength of concrete based on an 21 ASTM standard. They have standardized for biomedical 22 testing of medical devices. 23 And in the area that I got involved in was 24 developing a standard, they also do -- they develop 25 standards for the testing of asbestos.
15	17
1 wanted to ask you first about is what is this American 2 Industrial Hygiene Association? What is that? 3 A That is a group, sort of a, that is made up of 4 literally industrial hygienists and certified 5 industrial hygienists, as well as other folks who may 6 be interested. So it's an organization that, one, 7 provides the Certification if you want to be an 8 industrial hygienist. They provide an avenue for 9 publishing papers in the industrial hygiene world. 10 They provide an avenue or conference once a year as 11 well as local meetings, and they provide the ability 12 sort of like attorneys where you have to get continuing 13 education points every year. They provide that 14 organization for certified industrial hygienists to get 15 their points every year, to take continuing education 16 courses. 17 And so it has all aspects of industrial 18 hygiene. Not only asbestos, but every other type of 19 industrial problem that may be associated with either 20 exposure or radiation or sound or light, what have you. 21 Q And when we talk about industrial hygiene, 22 that would include asbestos? 23 A Yes. That's one of the sub groups that industrial 24 hygienists would be aware of. 25 Q Now, another one here I wanted to talk about,	1 Q So I'm going to write on here ASTM. And you 2 said that they set standards, right? So what exactly 3 was your role in setting standards for testing? 4 A Well, a particular -- what my role was in a 5 particular committee, it's called the, there's a lot of 6 initials and a lot of numbers in a lot of these things. 7 The D22-05 committee for -- 8 Q You said D22 dash? 9 A 05. 10 Q 05. 11 A So in that committee there was a standard that was 12 proposed to develop a way to measure asbestos in 13 building dust. So that if you had a building that had 14 asbestos in it and you wanted to know was that asbestos 15 being released and contaminating surfaces, the 16 committee wanted to put together a standard for that or 17 recipes on how to collect the sample, how to prepare 18 the sample, how to analyze the sample. And it was by 19 transmission electron microscopy. 20 And this was, and since I had already 21 developed a method, and EPA was going to use that 22 method, I was asked to be the, you know, sort of the 23 committee person that was going to write and shepherd 24 the method through the committee which is, can turn 25 into a very long process.

5 (Pages 14 to 17)

<p style="text-align: right;">18</p> <p>1 There is probably no other standard other 2 than the International Standards Organization, 3 standards that go through that much scrutiny. It took 4 almost six years to get that standard from start to 5 finish to be approved, since any committee member can 6 vote negative and you have to address that negative and 7 go back. And if you have 125 scientists as well as 8 industry members on your committee, it's like herding 9 cats to get everybody to agree. 10 I did that one and I swore I would never do 11 another one after six years. 12 Q That's fair. 13 You mentioned EPA standards. Have you ever 14 worked on EPA committees? 15 A I have. 16 Q Can you tell me a little bit about that? 17 A One committee I was on for a while until the EPA 18 ran out of funding was the peer-review group, and that 19 was made up of four scientists from around the country 20 and I was asked to participate in that. And we would 21 meet twice a year in Cincinnati at the headquarters of 22 EPA for this area, and we would make recommendations 23 for areas involving asbestos that they needed to 24 address. 25 We would also look over the testing that EPA</p>	<p style="text-align: right;">20</p> <p>1 Q Can you tell me a little bit about that? 2 A We have consulted for the General Services 3 Administration, GSA, on some asbestos issues they had 4 with bulk samples; post office, the same way. We have 5 consulted with the FAA on both asbestos issues and 6 their radar stations that go across the country where 7 they can hand one plane off from one station to another 8 as they travel. They had asbestos issues in some of 9 those buildings. 10 As well as doing work for them to determine 11 if a plane crash site, if there is a fire, because of 12 the exotic materials that make up planes, the FAA 13 wanted to know if first responders, what they may be 14 exposed to and would they need respirators. So we 15 actually had airplane parts that were ignited in jet 16 fuel at our facility and then taken in and measured 17 particulates, any type of gas that is released, and I 18 think we're getting ready to do another one of those. 19 We have done work for the Center of Disease 20 Control. We have worked for, had a contract with 21 the -- with the -- trying to think of the name now. 22 For the public health in looking at particular types of 23 situations involving the transmittal of AIDS virus, as 24 well as doing contracts for looking at the microvilli 25 in intestines for the supplement drinks, can they</p>
<p style="text-align: right;">19</p> <p>1 was having done via peer-review group for -- since they 2 were mostly using outside contracts to do their 3 testing, and we would also propose new areas. And I 4 did that for a number of years. 5 I was also on their Blue Ribbon panel for 6 electron microscopists, optical microscopists, to help 7 them develop a dust method for analyzing asbestos in 8 dust samples from buildings, but then that got kicked 9 to ASTM so that's how I got that job at ASTM because I 10 was writing the one for EPA with the other scientist. 11 Q Okay. So you were working, too, and that one 12 ends up getting kicked? 13 A Well, they decided to make it an ASTM standard 14 instead of an EPA standard so that it could be more 15 widely used. And ASTM does a much better job in 16 putting those types of standards together, in my 17 opinion, than EPA. 18 Q So basically you got kicked from this 19 committee back and that got kicked back to your ASTM 20 group? 21 A I think it would have been easier getting it 22 through the EPA than ASTM. 23 Q So have you ever consulted for the government 24 before besides the EPA that we've already mentioned? 25 A I have.</p>	<p style="text-align: right;">21</p> <p>1 expand the villi in there so it can get more nutrients. 2 So we've done some interesting stuff in the past. 3 Q You worked for NASA before? 4 A We did one project for NASA where it was an X-ray 5 telescope they were getting ready to launch and they 6 needed some very precise holes drilled into some of the 7 chips. When I say very precise holes I'm talking in 8 micrometer in size. And they wouldn't tell us why. 9 And we had this, we have these focused ion beams when 10 we had our Raleigh lab that could actually drill very 11 precise holes through different types of materials. 12 Q I just lost my Elmo. 13 MR. LINDER: My fault, your Honor. I kicked 14 the cord. My apologies. I think we're plugged back in 15 now. 16 BY MS. COOPER: 17 Q Dr. Longo, while he's doing that, have you 18 also done some publications and presentations before? 19 A I have. 20 Q What kind of topics do you usually present? 21 A Everything from my research work at the University 22 of Florida when I got my Ph.D. involving drug 23 targeting, developing the synthesis of a vehicle that 24 could take a payload of cancer drug that could be 25 injected into the tumor; to what I'm primarily, my</p>

<p style="text-align: right;">22</p> <p>1 research area is asbestos or exposure. So a number of 2 different topics. 3 Q Same thing on lectures and courses; you've 4 done that before as well? 5 A I have. I've taught at the American Industrial 6 Hygiene Society on teaching certified industrial 7 hygienists. And they're continuing education courses 8 about using electron microscopy to solve industrial 9 hygiene problems. I have taught at Georgia Tech, same 10 situation. I've taught at the Southern New York 11 University, week-long course on how to use transmission 12 electron microscopy for asbestos back in the early 13 '90s. And given presentations and lectures to various 14 groups over the years. 15 Q How about patents, do you have any patents? 16 A I have two patents from the research work 17 developing protein microspheres, the synthesis for drug 18 delivery. And both those patents were while I was at 19 University of Florida. 20 Q I'm going to write that down if we ever get 21 the Elmo back. Ercilyn, is there any way -- I hit on. 22 Perfect. Thank you so much. 23 All right. So we have you have patents. I'm 24 sorry. Okay. So I want to talk a little bit more 25 about your consulting work. If someone said that you</p>	<p style="text-align: right;">24</p> <p>1 A Scotts fertilizer still makes a product called 2 Turf Builder, and Turf Builder is designed to be a 3 fertilizer that you can put on your lawn, and it has a 4 slow time release of the nutrients so you only have to 5 do it every three months or six months. 6 Back starting in approximately the 1960s they 7 were using a carrier, when I say carrier it's, this 8 happened to be a mineral they could put the fertilizer 9 on so it could be spread. In this particular case they 10 were using Libby, Montana vermiculite. And then they 11 would coat these particles in a long laborious process 12 with a polymer, a urethane formaldehyde polymer that 13 once it got into the ground, the microbes, the bacteria 14 would start feasting on it and releasing nitrogen, or 15 they could put some other nutrients in. And it took 16 some time for that polymer to completely degrade. 17 So as it turned out they were told by the 18 company that sold them the vermiculite that Libby, 19 Montana vermiculite, it was contaminated or had high 20 concentrations of tremolite asbestos in it. So Scotts 21 was trying to figure out just how high the 22 concentration was and they relied on companies to do 23 testing. 24 In fact, W.R. Grace tested their product and 25 found out that they, after all the processing, the</p>
<p style="text-align: right;">23</p> <p>1 got \$30 million from plaintiffs' attorneys is that 2 true? 3 A Not me personally. No. 4 Q Okay. Could you tell me if -- 5 A If that was true my wife would be very happy. 6 Q Right. 7 A Over 30 years our company has billed about a 8 million dollars a year on average, some years higher, 9 some years lower in my work involved with plaintiffs' 10 attorneys. That is a true statement. 11 Q Do you only consult for plaintiffs' 12 attorneys? 13 A No. We also do work for defendants doing the same 14 sort of thing in asbestos cases. 15 Q Okay. Can you tell me a little bit about 16 what kind of defendants you've worked for before? 17 A We've done a lot of work for Westinghouse or 18 General Electric, for Carborundum, for American 19 Insulated Wire, Continental Wire, Rockbestos wire, 20 Eutectic company. We've done work for Tremco and even 21 lawnmower engines. 22 Q Have you ever worked for a company called 23 Scotts? 24 A And Scotts was another client. Yes. 25 Q Can you tell me a little bit about that?</p>	<p style="text-align: right;">25</p> <p>1 amount of asbestos in the vermiculite was reduced 2 pretty substantially. And Grace was trying to figure 3 out how to do it. 4 So I got hired when they were suing, in 5 lawsuits to see if you're starting with vermiculite 6 that has a fair amount of contamination of tremolite in 7 it, then you have a product that you processed and 8 coated, encapsulated, how much weight initially was in 9 the -- of tremolite was in the vermiculite, then how 10 much was after they went through the process. And 11 that's what we were asked to do is make that comparison 12 for Scotts. 13 Q Okay. I want to focus a little bit more on 14 MAS, your company. 15 MS. COOPER: Your Honor, at this time 16 plaintiff is going to offer, for demonstrative 17 purposes, Plaintiff's 16 -- I'm sorry, 160.2. 18 Tendering to defense counsel for examination. 19 MR. DUBIN: Examination of the photo, you 20 mean? 21 MS. COOPER: Sorry. Yes. Examination and 22 offering for demonstrative opinions. 23 MR. DUBIN: I have no objection to the 24 photographs being used. I'll wait to voir dire. 25 THE COURT: Sure. Continue.</p>

<p style="text-align: right;">26</p> <p>1 BY MS. COOPER: 2 Q All right. What is this? 3 A That's our building at MAS. That's the front 4 entrance. 5 Q And can you tell me how many people work at 6 MAS? 7 A Currently I believe it's 41. 8 Q And you mentioned the different specialties. 9 When we talk about -- first of all, does MAS charge for 10 the time that -- for you to be here? 11 A It does. 12 Q Can you tell me a little bit about that? 13 A My billing rate for everything I do is \$550 an 14 hour. 15 Q Where does that money go? 16 A It goes to MAS and then my billing, any other 17 consultants' billing, our analysis, any testing we do 18 goes to the company to keep the company running. Every 19 two weeks we're expected to give the employees 20 paychecks where you have to have health insurance and 21 insurance on the building, electricity on, to pay the 22 taxes, the supplies. 23 So it's, the company is a for-profit company. 24 We don't apologize for that. And in order to keep it 25 running we have to bill for our time and be able to</p>	<p style="text-align: right;">28</p> <p>1 polarized light microscopy, or PLM, transmission 2 electron microscopy by the -- essentially it's the 3 Federal Government, but it's called the National 4 Voluntary Laboratory Accreditation Program. 5 We're certified by the AIHA, or the American 6 Industrial Hygiene Association, for using, analyzing 7 fibers or asbestos fibers by another optimal microscopy 8 technique called phase contrast microscopy, or PCM, as 9 well as a host of other inorganics, you know, metals 10 and analysis and organic analysis, even airborne spore 11 analysis or mold. 12 We're certified by the International 13 Standards Organization for some specialty testing that 14 we do, and we're also certified by the International 15 Standards Organization to certify other folks who are 16 doing tests, a certain type of testing. And we also 17 are a registered lab for the FDA. 18 Q Can you estimate for MAS how many products 19 you've tested? 20 A If we just keep it just to asbestos products or 21 asbestos samples, just the sheer number of samples that 22 have come into our laboratory since opening the door in 23 February of 1988, I would estimate we're probably 24 getting close to 400,000 individual samples. 25 Q You said 400 --</p>
<p style="text-align: right;">27</p> <p>1 keep ahead of the expenses just like any normal 2 company. 3 Q I'm sorry to go back to this. So we talked a 4 little bit about, you said it was 30 years, so that was 5 30 million in 30 years? 6 A I think that's the average on plaintiffs' 7 attorneys and all the testing that we did over the 8 years, especially for the product identification. 9 Q Do you know how much you've charged asbestos 10 defendants for your work? 11 A We're averaging about a million dollars a year on 12 behalf of defendants. 13 Q So do you know how much, I guess, recently? 14 A I guess, I would estimate over the last ten years, 15 about the same we charged for plaintiffs. \$10 million. 16 Q \$10 million? 17 A Over ten years. We average about a million 18 dollars a year for them. 19 Q You said that was for defendants. Was that 20 in asbestos? 21 A It's primarily asbestos. 22 Q Now, does MAS have any accreditations? 23 A We do. 24 Q Can you tell me a little bit about that? 25 A We're accredited for asbestos analysis by</p>	<p style="text-align: right;">29</p> <p>1 A Thousand. Of all types of samples. 2 Q Have you published on that fore? 3 A I have. On asbestos. 4 Q And to be clear about why you're here today, 5 are you a geologist? 6 A I am not a geologist. 7 Q Are you a mineralogist? 8 A I don't have a degree in mineralogy, but I have to 9 understand it quite a bit to make positive 10 identification of asbestos in the samples we test. But 11 I didn't get a degree in mineralogy. 12 Q Are you a medical doctor? 13 A I am not. I am still not a medical doctor. 14 Q Are you an epidemiologist? 15 A No, I'm not. 16 Q But are you a material scientist? 17 A I would say I'm a material scientist that has 18 specialized for the last 30 years in the 19 characterization, and that's my area of research at the 20 company, the characterization of samples for asbestos, 21 and those samples can cover bulk samples that we call 22 them, like talcum powder, water samples, air samples, 23 every type of bulk sample that you can think of, as 24 well as human tissue samples for what we call fiber 25 burden analysis.</p>

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<p style="text-align: right;">30</p> <p>1 Q And you said you've tested Johnson & 2 Johnson's product before. Was that for asbestos 3 content and exposure? 4 A Yes. 5 Q And have you reviewed and considered Johnson 6 & Johnson internal records when you were looking at or 7 forming your opinions? 8 A Yes, I have. 9 Q And are you prepared to tell us your 10 conclusions based on your experience as a material 11 scientist and testing of asbestos and assessment of 12 asbestos exposure specifically? 13 A Yes, I am. 14 MS. COOPER: Your Honor, at this time we'd 15 like to offer Dr. Longo as an expert in material 16 scientist, testing for asbestos, and assessment of 17 asbestos exposure. 18 MR. DUBIN: I'd like to voir dire, please. 19 THE COURT: Okay. One more time on the areas 20 of qualification you're seeking. 21 MS. COOPER: Yes, your Honor. Material 22 science, testing of asbestos, and assessment of 23 asbestos exposure. 24 THE COURT: Thank you. You may proceed on 25 voir dire.</p>	<p style="text-align: right;">32</p> <p>1 besides us, and hopefully the record. That's the 2 important part. 3 MS. COOPER: Thank you. I just want to make 4 sure we're staying within the scope of qualifications 5 and not going outside the scope into cross-examination 6 as far as qualifying the expert, specifically talking 7 about plaintiffs' lawyers versus defense lawyers. 8 MR. DUBIN: There was extensive discussion in 9 your voir dire about his work for plaintiffs' lawyers, 10 his work for defense lawyers, how much he's made, what 11 he's done within litigation. I'm within the scope of 12 what you said. 13 THE COURT: Agreed. You may continue. 14 MR. DUBIN: Thank you. 15 (Sidebar ends.) 16 BY MR. DUBIN: 17 Q Thank you. Can we return back to the screen? 18 Dr. Longo, can you verify that the statement 19 I made in opening in this case that you have never 20 tested cosmetic talc when you weren't being paid to do 21 it by plaintiffs' lawyers is correct? 22 A That is correct. 23 Q And more than that, I think you've agreed 24 that the only time you've tested talcum powder is for 25 plaintiffs' lawyers suing for money in litigation,</p>
<p style="text-align: right;">31</p> <p>1 VOIR DIRE BY MR. DUBIN: 2 Q Hi, Dr. Longo. How are you? 3 A Fine. Good morning. 4 Q Just so the jury understands what's going on 5 right now, I'm going to ask you some questions about 6 the qualifications that Miss Cooper discussed with you 7 and then probably disappear for a while before I come 8 back and talk to you about the substance of your 9 opinions. 10 A Yes, sir. I understand. 11 Q Thank you. 12 You talked a little bit about work that you 13 have done in the past and if we can just put up slide 14 1, I want to verify this. I used this in opening 15 statement. I'm sorry. Can we switch to defense? 16 This is true, is it not; that you, Dr. Longo, 17 have never tested cosmetic talc when you were not being 18 paid to do it by plaintiffs' lawyers? 19 MS. COOPER: Objection, your Honor. May we 20 approach? 21 THE COURT: Sure. 22 (Sidebar.) 23 MS. COOPER: Your Honor, my objection is -- 24 THE COURT: You need to speak a little bit 25 louder. Don't worry about it, no one can hear you</p>	<p style="text-align: right;">33</p> <p>1 right? 2 A That is correct. I've been working on behalf of 3 plaintiffs in this area. 4 Q And none of, for example, you talked about 5 work for NASA. None of that involved testing for 6 cosmetic talc, right? 7 A That is correct. 8 Q And Miss Cooper asked you a lot about money, 9 so I want to talk a little bit about that same history 10 and flesh it out a little bit more. You mentioned that 11 you're president and owner of MAS, right? 12 A Yes, sir. 13 Q You own about 75 percent of that company? 14 A That is correct. 15 Q And you said you opened the doors of MAS, I 16 think you've said before, in about February of 1988, 17 right? 18 A Yes, sir. 19 Q And soon after opening the doors of MAS you 20 ran an ad, which I know you've seen before and expect 21 to see again today, right? 22 A Yes, sir. Probably for the rest of my career. 23 Q Okay. So let's look at it. I showed it in 24 opening. It's slide 2. Made it a little easier to 25 see.</p>

<p style="text-align: right;">34</p> <p>1 This is an ad that you ran in about 1989, 2 correct? 3 A Yes, sir. It was either 1989 or 1990. 4 Q And you chose to picture yourself in the 5 advertisement in a courtroom, right? 6 A That is correct. 7 Q You obviously could have, instead, taken a 8 picture of yourself -- and that's Mr. George Yamati 9 with you, right? 10 A It is. 11 Q You could have taken a picture instead in, 12 for example, a laboratory, right? 13 A In hindsight, that might have been a good idea. 14 Q And the ad was taken out in a magazine called 15 The National Asbestos Council, right? 16 A Yes, sir. 17 Q And Miss Cooper mentioned if someone were to 18 say that you made 30 million personally, I just want to 19 show what I actually did say in opening and see whether 20 you agree that that was correct. And if we could look 21 at slide 3. That's what I said in opening statement. 22 I think you confirmed that today, right; that MAS has 23 made about \$30 million working for plaintiffs' 24 attorneys in litigation, right? 25 A MAS has billed \$30 million.</p>	<p style="text-align: right;">36</p> <p>1 work that you've done as a consultant and an expert in 2 asbestos litigation has basically been what has allowed 3 your lab, MAS, to survive? 4 A Being a for-profit company and making a profit has 5 allowed us to survive, yes, sir. 6 Q You would agree that working as a consultant 7 in asbestos litigation has basically been what has 8 allowed your lab to survive, correct? 9 A Yes, sir. All of the above. 10 Q All of the above. I just want an answer to 11 my specific question, sir. Working as a consultant and 12 an expert in asbestos litigation has basically been 13 what has allowed your lab to survive, correct? 14 A I would say that's correct. 15 Q Thank you. 16 One of the things you mentioned before is 17 you've got to keep the lights on, right? 18 A We do. 19 Q And you have not published any papers related 20 to talc, correct? 21 A That is correct. 22 Q You've never visited any of the cosmetic talc 23 mines at issue in this case, correct? 24 A No. I haven't. 25 Q And you, yourself, did not actually do much</p>
<p style="text-align: right;">35</p> <p>1 Q Billed. Okay. 2 A Never made \$30 million. 3 Q And you've been testifying in asbestos 4 litigation back not too long, since not too long after 5 that ad ran back in the late 1980s, right? 6 A I think '91 or '92 was some of the first cases. 7 Q Since that ad ran you've given about 2500 to 8 3,000 depositions, right? 9 A That is correct. 10 Q I think you've said that you testify at least 11 once a week every week for about the last five years, 12 right? 13 A Yes, sir. 14 Q More recently you're averaging about one to 15 two depositions a week? 16 A That is correct. 17 Q 95 percent of the time or more that you're in 18 court it's for plaintiffs' attorneys in asbestos 19 litigation, right? 20 A That is correct. 21 Q And when it comes to talc litigation, 100 22 percent of your work is on behalf of plaintiffs' 23 attorneys, right? 24 A That is correct. 25 Q And I think you would agree with me that the</p>	<p style="text-align: right;">37</p> <p>1 of the microscopy that goes into the reports that 2 you're going to be discussing today, right? 3 A From start to finish of a particular analysis, 4 that's correct. 5 Q However, I think, to be fair, you've said 6 that before you put your name on a report or you author 7 it, you're intimately involved with the details of the 8 analysis and the scientists at MAS to ensure the 9 accuracy and reliability of that report, correct? 10 A That is correct. 11 Q Okay. And you are not here to talk about the 12 medical cause of Mr. Rimondi's mesothelioma, correct? 13 A I am not. 14 MR. DUBIN: And with that, your Honor, we 15 wouldn't object to him being qualified as a material 16 scientist for purposes of testing the products that he 17 has looked at, the Johnson & Johnson products he's 18 going to be talking about today, so we don't object to 19 that. 20 THE COURT: Are you objecting to any of the 21 other areas that he's been proposed? 22 BY MR. DUBIN: 23 Q Well, let's be clear: When you talk about 24 being, you're talking about exposure assessments, you 25 are not a certified industrial hygienist, right?</p>

<p style="text-align: right;">38</p> <p>1 A No, I'm not.</p> <p>2 MR. DUBIN: Your Honor, I'll say fine on all</p> <p>3 of them, just to make it easier.</p> <p>4 THE COURT: Thank you.</p> <p>5 Members of the jury, Dr. Longo has now been</p> <p>6 qualified as an expert in the fields of material</p> <p>7 scientist -- material science, testing of asbestos and</p> <p>8 assessment of asbestos exposures.</p> <p>9 You may proceed, counsel.</p> <p>10 MS. COOPER: Thank you, your Honor.</p> <p>11 BY MS. COOPER:</p> <p>12 Q Dr. Longo, if I can get the Elmo again.</p> <p>13 Thank you.</p> <p>14 It's clear you're not here to talk about</p> <p>15 medical causation, right?</p> <p>16 A No. It's not my area. I don't testify about</p> <p>17 that.</p> <p>18 Q You're not a one-size-fits-all expert?</p> <p>19 A No, I'm not.</p> <p>20 Q And we have you here to discuss your</p> <p>21 expertise, and again remind us what that is.</p> <p>22 A My expertise is in the area of analyzing samples</p> <p>23 and determining what essentially the ingredients are,</p> <p>24 how was the sample made up, what are the different</p> <p>25 components, what is the percentages, and also I do, I'm</p>	<p style="text-align: right;">40</p> <p>1 So we do the exact same thing for both sides.</p> <p>2 If they want to come and have us do the analysis and we</p> <p>3 do it, we'll provide a report, same as we do for</p> <p>4 plaintiffs.</p> <p>5 Q I want to ask you about the ad. I can't seem</p> <p>6 to find my copy of it right now, but Mr. Dubin put up</p> <p>7 part of that ad. What's in the rest of that ad?</p> <p>8 A The bottom of the ad actually talks on what the ad</p> <p>9 was about. The ad was about that George Yamati was</p> <p>10 part of our -- part of our group and he was the actual,</p> <p>11 if you'll probably hear later about what's known as the</p> <p>12 EPA levels of analysis by TEMs 1, 2 and 3, and it's</p> <p>13 also known as the Yamati method.</p> <p>14 Essentially, one of the first TEM analysis</p> <p>15 that was published, it's still a draft, and we were</p> <p>16 discussing about how good our lab is, or we call it</p> <p>17 final air clearance. That is if somebody takes an air</p> <p>18 sample in a school, after the asbestos has been</p> <p>19 removed, you have to certify that that air is clean</p> <p>20 enough for kids to go back in there. So it's final air</p> <p>21 clearance.</p> <p>22 And there was a lot of competition out there,</p> <p>23 and we wanted to have a stand-alone that not only were</p> <p>24 we one of the best in the country at doing this, but if</p> <p>25 our data is ever called into question, we'll go and</p>
<p style="text-align: right;">39</p> <p>1 not a certified industrial hygienist, but I consider</p> <p>2 myself an industrial hygienist just in the area of</p> <p>3 asbestos and how our results relate to any potential</p> <p>4 exposure and characterization of it.</p> <p>5 Quite simply, I'm a measurement guy, electron</p> <p>6 microscopist, specialist to analyze samples for the</p> <p>7 content of how much asbestos is present, that's there.</p> <p>8 Q Okay. Mr. Dubin just asked you about the</p> <p>9 fact that you've never tested cosmetic talc when you're</p> <p>10 not paid by plaintiffs' lawyers, but if J&J or other</p> <p>11 talc companies asked you to, would you?</p> <p>12 A Yes, we would. Absolutely.</p> <p>13 Q And have they ever asked you to testify?</p> <p>14 A They have never, none -- they have not called or</p> <p>15 asked for us to do any testing of their cosmetic talc</p> <p>16 samples.</p> <p>17 Q But have other asbestos companies hired you</p> <p>18 to test their products?</p> <p>19 A They have. We have done that quite a bit, where</p> <p>20 we actually test the product and these defense</p> <p>21 companies have asked us to actually do a, what we call</p> <p>22 a work practice study or a hygiene study. We have a</p> <p>23 specially built room where we can use these products</p> <p>24 just like they used to use them in the field to see if</p> <p>25 there's measurable exposure or not.</p>	<p style="text-align: right;">41</p> <p>1 defend it in this setting. This is what the courtroom</p> <p>2 is about.</p> <p>3 MS. COOPER: Your Honor, at this time</p> <p>4 plaintiffs offer, for demonstrative purposes, 161.12.</p> <p>5 It's been tendered to defense counsel.</p> <p>6 MR. DUBIN: No objection for that purpose.</p> <p>7 BY MS. COOPER:</p> <p>8 Q So this is the part that we've seen already,</p> <p>9 right?</p> <p>10 A I think we've seen a little bit higher.</p> <p>11 Q Little bit higher. So right here.</p> <p>12 A Right there.</p> <p>13 Q And then you said at the bottom, we're</p> <p>14 actually talking about what the ad is about, and you</p> <p>15 talked about final air clearance testing by TEM. Is</p> <p>16 that what you just discussed?</p> <p>17 A Yes. It was never designed for attorneys to call</p> <p>18 me. It was actually -- it was about our ability. We</p> <p>19 still feel we're one of the best labs in the country.</p> <p>20 So we wanted to separate us out for, and you'll see in</p> <p>21 the bottom on the other side the final clearance lab.</p> <p>22 Q Is that right here?</p> <p>23 A Correct. There's nothing about being an expert in</p> <p>24 litigation in that.</p> <p>25 Q Let's get back to Johnson & Johnson Baby</p>

<p style="text-align: right;">42</p> <p>1 Powder. I want to ask you the same two questions we 2 actually asked Dr. Blount, which is have you tested 3 Johnson & Johnson talcum powder? 4 A We have. 5 Q And what -- and have you found asbestos in 6 Johnson & Johnson talcum powder? 7 A We have. 8 Q Let's get down our road here. Talked about 9 you, asbestos microscopist. I want to talk about 10 testing 101. We've heard a lot of different terms and 11 I want to make sure we're keeping them straight. Okay? 12 So first of all, I don't know about everybody 13 else, but I have not probably been around a microscope 14 or worked with a microscope since probably high school. 15 So I want to talk about first what are the different 16 kinds of microscopes that we've encountered in this 17 case. The first one is the XRD. What does that even 18 mean? 19 A Well, it means X-ray diffraction. And it's not a 20 microscope. 21 Q Okay. See, I told you. Not even since high 22 school. 23 A The definition of a microscope would be that you 24 can take something and magnify it so that you can 25 increase your ability to see smaller and smaller</p>	<p style="text-align: right;">44</p> <p>1 its geometrical shape. A geode, most everybody has 2 seen a geode. That's an actual crystal habit. Forms a 3 geode where you cut it open and the crystals are mostly 4 inside. Crystals also form fibers, that is a 5 crystalline habit, and some people will say that's 6 asbestiform, but typically it's fibrous like asbestos. 7 It can't tell you any of that. Alls it can tell you is 8 it's a mineral. 9 Second problem is it's not very sensitive. 10 Q Okay. 11 A It has detection issues. 12 Q What's its sensitivity? 13 A Well, today, new state-of-the-art XRDs for 14 tremolite series, asbestos solid solution series, you 15 should be able to get down to .1 percent. If you have 16 a very good analyst and the sample preparation is okay. 17 Q Down to .1 percent? 18 A For tremolite. 19 Q To me, that sounds pretty small. Is that 20 pretty small in the grand scheme of things, though? 21 A Well, pretty small really doesn't have a 22 definition. No. To me, that's very high. .1 percent 23 would be at a level where you have millions of asbestos 24 fibers or tremolite fibers in the samples that you're 25 looking at, millions and millions.</p>
<p style="text-align: right;">43</p> <p>1 things. The XRD doesn't magnify it. It uses X-rays, 2 the same way that X-rays are generated if you're going 3 to have an X-ray or broke a bone in your hand. And 4 those X-rays, when they hit a mineral, due to the 5 crystalline structure of the mineral, you get an angle 6 of reflection diffraction, and those angles can be very 7 specific for a type of mineral. 8 So it's a tool that can be used to identify 9 minerals. It has -- all these tools have advantages 10 and disadvantages. The XRD's advantages, it can look 11 at fairly sizeable samples. 12 Q When you say, "sizeable samples," I mean, 13 what are we talking about? 14 A We're talking two or three grams of material to 15 make the sample. So you can cover a large area as we 16 get to the microscopy techniques. And that's its 17 advantage. And its advantage is it can positively 18 identify certain types of minerals, specifically 19 asbestos, depending on the other stuff that may be 20 there that doesn't interfere with that analysis. 21 That's its advantages. 22 The disadvantages are, one, it can't tell 23 you, and you'll hear a lot of this, if the minerals, 24 the crystalline habit of the mineral. And crystalline 25 habit means that when the mineral was formed, what's</p>	<p style="text-align: right;">45</p> <p>1 Q So even at .1 percent you're talking about 2 millions of fibers still? 3 A Fibers and bundles for tremolite. Anthophyllite 4 is higher because of the talc issue associated with it. 5 It interferes. Some people say you can't get less than 6 one percent. I would say today you might be able to 7 get .5 to .3 percent anthophyllite with the state of 8 the art system. 9 Q Can you define to us, when we talk about 10 level of detection, what is level of detection? 11 A Level of detection is how much has to be in the 12 sample so you can literally detect it. If you don't 13 find asbestos in a sample you can say it is below my 14 level of detection. Can't say it's not there. Can't 15 say it's there. It's just below the level of detection 16 like all analytical protocols. 17 So you have to have a certain amount in the 18 talc before you can see it. So when I say level of 19 detection is .1 percent for tremolite, if you had .02 20 percent, even though that still will account for 21 millions of fibers, .02 percent, you won't be able to 22 detect it by XRD unless you do something to the sample 23 prep to concentrate it. Even though you may have a lot 24 in there, you can't detect it. 25 So that method has, what I would call,</p>

<p style="text-align: right;">46</p> <p>1 detection issues for asbestos.</p> <p>2 MS. COOPER: And, your Honor, for</p> <p>3 demonstrative purposes, plaintiffs offer 161.6, 161.5.</p> <p>4 This is 160.1 and 263.</p> <p>5 MR. DUBIN: 160.1, 161.5, 161.6 and 2 what 3?</p> <p>6 243?</p> <p>7 MS. COOPER: 263.</p> <p>8 MR. DUBIN: 263. I don't have any objections</p> <p>9 to those being used for demonstrative purposes.</p> <p>10 THE COURT: Continue.</p> <p>11 MS. COOPER: Thank you, your Honor.</p> <p>12 BY MS. COOPER:</p> <p>13 Q So is this, when we talk about an XRD</p> <p>14 machine, is that what we're talking about?</p> <p>15 A Yes. That's XRD. And if you go right in right</p> <p>16 about the middle of that or down below is where the</p> <p>17 sample goes, and the machine will generate X-rays, you</p> <p>18 know, using anodes and cathodes and electron beams to</p> <p>19 generate the X-rays. Then it penetrates the sample.</p> <p>20 And then on to the right you have what looks</p> <p>21 like it's hanging off the side, that's the detector</p> <p>22 that then goes through all the different degrees for</p> <p>23 the angle and you get a spectrograph, and then you</p> <p>24 interpret the results.</p> <p>25 Q Okay. The next thing that we are or the next</p>	<p style="text-align: right;">48</p> <p>1 because you're using an optical microscope, you go up</p> <p>2 to 400 times, you can see the chunks or little pieces</p> <p>3 of rock or is it fibrous, is it a bundle.</p> <p>4 It was primarily designed for commercially</p> <p>5 added asbestos products where you're dealing with what</p> <p>6 I call very high percentages of asbestos, .5, one, ten,</p> <p>7 20, 50 percent, even 100 percent.</p> <p>8 The issues with it is it also has detection</p> <p>9 limit issues. And depending on how much time you're</p> <p>10 willing to take with the sample, it's initially a</p> <p>11 typical PLM microscope in a laboratory where somebody</p> <p>12 does this routinely, they may spend ten minutes on the</p> <p>13 sample. And detection limit is usually about .2 to .3</p> <p>14 to .5, depending on the sample, maybe .1.</p> <p>15 So it's better than the XRD, but it is not as</p> <p>16 good for really low detection limits as the TEM, unless</p> <p>17 you're willing to do the extra that's needed to analyze</p> <p>18 samples by PLM to increase the detection limit.</p> <p>19 Q We're definitely going to be talking about</p> <p>20 that. Before we do, looking at -- 161.5. Is that a</p> <p>21 PLM microscope?</p> <p>22 A No. That's actually a polarized light -- PCM, but</p> <p>23 it's using the same principle.</p> <p>24 Q Okay. What about looking at 60 -- I'm sorry,</p> <p>25 160.1. Can you tell us what this is?</p>
<p style="text-align: right;">47</p> <p>1 kind of technology we've heard about is PLM. Can you</p> <p>2 tell us, what is PLM?</p> <p>3 A PLM is polarized light microscopy, and it's an</p> <p>4 optical microscope that has been modified a little bit</p> <p>5 that it has two polarizing lenses in it. One below the</p> <p>6 sample and one above. One's called the polarizer and</p> <p>7 one's called the analyzer.</p> <p>8 And these polarizing lens can turn and cause</p> <p>9 the light to be essentially put in one direction, the</p> <p>10 wavelength of light or the vibration in one direction</p> <p>11 or another. When you buy sunglasses that says that or</p> <p>12 polarized, it has one polarized lens that eliminates a</p> <p>13 lot of the light coming in that scatters normally,</p> <p>14 going in -- these wavelengths are going in many</p> <p>15 different directions and makes it all go in one</p> <p>16 direction.</p> <p>17 And if you turn it, by turning that</p> <p>18 polarizing analyzers you can change the direction of</p> <p>19 the wavelength of light which gives you the ability to</p> <p>20 identify by colors the types of minerals you're looking</p> <p>21 at.</p> <p>22 Q So what is its detection limit?</p> <p>23 A Polarized light microscopy, the advantages are it</p> <p>24 can positively identify different types of asbestos.</p> <p>25 It can give you the geometrical shape of the minerals</p>	<p style="text-align: right;">49</p> <p>1 A This is a new state of the art transmission</p> <p>2 electron microscope and it's an automated transmission</p> <p>3 electron microscope. And this is the next generation.</p> <p>4 This is, if you had pictures of an older transmission</p> <p>5 electron microscope, where the column is, that tall</p> <p>6 thing and towards the bottom you would have almost a</p> <p>7 viewing port that you would look at, and you would have</p> <p>8 handles to turn to move the sample around.</p> <p>9 That's all been replaced by a joystick,</p> <p>10 roller ball, and knobs so you actually can sit and look</p> <p>11 at the screen instead of directly looking into the</p> <p>12 microscope.</p> <p>13 Q And, I mean, you said that this is state of</p> <p>14 the art. Is this actually yours?</p> <p>15 A That's sitting in our laboratory. Yes. We've had</p> <p>16 it for about a year.</p> <p>17 Q How expensive is one of these?</p> <p>18 A If you were to go out and buy that microscope with</p> <p>19 everything on it, it's getting close to \$800,000.</p> <p>20 Q I guess, could you tell us what's the level</p> <p>21 of detection for TEM?</p> <p>22 A You can detect down to, for asbestos, for talc</p> <p>23 samples, we have gotten a detection limit down to 3,000</p> <p>24 fibers or bundle s of asbestos per gram of cosmetic</p> <p>25 talc.</p>

<p style="text-align: right;">50</p> <p>1 Q You said 3,000?</p> <p>2 A Yes.</p> <p>3 Q You said per gram?</p> <p>4 A Correct. I'm not sure anybody has a lower</p> <p>5 detection limit than that we are using right now.</p> <p>6 Q Can you tell me a little bit about how this</p> <p>7 works? And I've also brought, this is Exhibit 263.</p> <p>8 What is this and how does that work with TEM?</p> <p>9 A That's actually the grid. The TEM grid. That's</p> <p>10 actually the sample holder for this microscope. Now,</p> <p>11 it's been blown up. That round disk there with the</p> <p>12 hole, with the squares in it is actually only three</p> <p>13 millimeters in size from side to side.</p> <p>14 And that's the biggest sample you can put</p> <p>15 into a transmission electron is a three millimeter and</p> <p>16 they call them TEM grids. You'll hear TEM grids and</p> <p>17 TEM grid openings. If you look in the middle there,</p> <p>18 you can see -- the light is --</p> <p>19 Q Does that help?</p> <p>20 A Yes. You can see all these squares. Those are</p> <p>21 100 squares and these are finder grids. You can see at</p> <p>22 the top it goes from A to J and down the side it goes</p> <p>23 from essentially 1 to 10.</p> <p>24 So what the TEM microscopist will do is look</p> <p>25 in these grid openings, it's a process of transferring</p>	<p style="text-align: right;">52</p> <p>1 300 grid openings, 500 grid openings. It takes a lot</p> <p>2 longer, but if you want the sensitivity you have to do</p> <p>3 these things, either prepare the sample differently or</p> <p>4 look at more grid openings. The TEM stays the same.</p> <p>5 Q So are each of these methods useful?</p> <p>6 A For -- depending what you're analyzing for</p> <p>7 cosmetic talc, for certain mines, I don't believe XRD</p> <p>8 has any utility. It's not sensitive enough. It can't</p> <p>9 tell you what form the potential asbestos is in.</p> <p>10 But over the years, on the research we've</p> <p>11 done, I'm more that you -- I believe you need to do now</p> <p>12 at least two different types of PLM analysis as well as</p> <p>13 TEM analysis to characterize cosmetic talcs.</p> <p>14 Q Has PLM analysis evolved over time?</p> <p>15 A It's pretty much stayed the same. We decided that</p> <p>16 we had to take it in our laboratory to a higher</p> <p>17 sensitivity level that's not usually standard out in</p> <p>18 the industry. Because again, PLM was really designed</p> <p>19 for asbestos added products, all the protocols we'll</p> <p>20 say construction products. In order to get to the</p> <p>21 detection limits you need, you have to take some extra</p> <p>22 steps with the PLM that we do now.</p> <p>23 Q Last kind of testing I wanted to talk to you</p> <p>24 about is air sampling. Can you tell me about that?</p> <p>25 A Sure. Again, the samples that we analyze by</p>
<p style="text-align: right;">51</p> <p>1 the sample on top of that grid, where you can see</p> <p>2 through it, and he'll say, okay, A4 I found an asbestos</p> <p>3 fiber or bundle. Anybody can go back to A4 and look at</p> <p>4 that if they want to see it. So we analyze by grid</p> <p>5 openings. And a number of grid openings and how the</p> <p>6 sample is prepared tells you how good your detection</p> <p>7 limit is.</p> <p>8 The TEM itself hasn't changed much in the</p> <p>9 last 40, 50 years, just better resolution but for</p> <p>10 asbestos. It's all about the sample preparation. If</p> <p>11 you do a lousy sample preparation and don't take into</p> <p>12 account detection limits, you have really high</p> <p>13 detection limits. The instrument has nothing to do</p> <p>14 with the sample prep. So the sample prep is key for</p> <p>15 TEM analysis.</p> <p>16 Q You talked about grids. It looks like this</p> <p>17 would be 100 grids, right?</p> <p>18 A Correct. Each grid typically has 100 grids. For</p> <p>19 our analysis we analyzed two grids, 50 openings on each</p> <p>20 for 100 grid openings.</p> <p>21 Q So you usually do 100 grid openings, you</p> <p>22 said?</p> <p>23 A Usually. Sometimes we will do more, depending on</p> <p>24 the sample preparation. I think we've done as high as,</p> <p>25 not for the bulk analysis, for other things, as high as</p>	<p style="text-align: right;">53</p> <p>1 transmission electron microscopy and even by optical</p> <p>2 microscopy is bulk samples. You know, we're talking</p> <p>3 here about cosmetic talc, but other types of samples of</p> <p>4 bulk samples for asbestos; water samples for asbestos;</p> <p>5 tissue samples for asbestos; dust particles for</p> <p>6 asbestos. And each way you collect the sample always</p> <p>7 ends up on a filter that you're going to process for</p> <p>8 TEM.</p> <p>9 So there's -- makes no difference how the</p> <p>10 asbestos got on that filter. In one case it's an air</p> <p>11 sample. In another case it's a detection limit. In</p> <p>12 another case it's a water sample. It's all got to be</p> <p>13 collected on a filter to go into the transmission</p> <p>14 electron microscope. Air sample is nothing more than</p> <p>15 that.</p> <p>16 If you wanted to know if you could detect</p> <p>17 asbestos in the air in this courtroom, you would take</p> <p>18 an air sample. They're usually a cassette, a lot of</p> <p>19 them look like what 35 millimeter film canisters look</p> <p>20 like that they don't sell anymore. And in the bottom</p> <p>21 of that cassette is a filter specifically designed to</p> <p>22 let air through but trap all the microscopic particles</p> <p>23 that are in the air. Then you take that filter and you</p> <p>24 can prepare it for the TEM or the optical microscopy to</p> <p>25 count how many fibers.</p>

<p style="text-align: right;">54</p> <p>1 If you're looking at cosmetic talc, you put 2 it on a filter; however, you're using usually some sort 3 of liquid. The filter collects the talc and any 4 asbestos there, and then you put it in the TEM or 5 whatever you're going to use. It's all the same. 6 So air sampling is something that our 7 laboratory routinely does and a lot of contract labs 8 do. 9 Q So air sampling, can you actually tell how 10 many fibers are in a particular amount of air? 11 A Yes. 12 Q How is that measured? 13 A The air samples, the cassettes are hooked to a 14 pump that will pull air through it at a very precise 15 rate. So you can say all right, I sampled this air and 16 I sampled ten liters of air. There's a thousand cubic 17 centimeters in every liter. And we report our results 18 in fibers per cc or cubic centimeter. Cubic centimeter 19 is about the size of a sugar cube. That's stayed 20 pretty standard for a long time now. 21 Q I'm going to write here, just so I remember 22 fibers per cc, put sugar cube. 23 A Or cubic centimeter also known as milliliters, ml. 24 You might see ml or cc. It's all the same. 25 So once we analyze that sample, then we</p>	<p style="text-align: right;">56</p> <p>1 Ercilyn, if I could get the Elmo? Thank you 2 so much. 3 BY MS. COOPER: 4 Q All right. Dr. Longo, welcome back. 5 So before we move off of different kinds of 6 testing, we've heard so much kind of the pieces about 7 the concentration method. So can you tell me just 8 briefly, we're going to talk about it more in a minute, 9 what is the concentration method? 10 A It's essentially the sample preparation part of 11 the analysis, where you use a heavy liquid density 12 separation, meaning the liquid that you have the 13 material in is denser than one type of material, but 14 lighter than the other. 15 So think of a cork. The density of water is 16 one gram per cubic centimeter. Cork is lighter than 17 that, has less density, so it floats. A sinker on a 18 fish line made out of lead has a higher denser than 19 water so it sinks. 20 We use the same concept with separating out 21 asbestos from talc. We put a heavy liquid in the 22 mixture and then the density of the liquid we're using 23 is, it is lower than the talc, but higher than the 24 asbestos we're looking for. Put it in a centrifuge, 25 spin it real fast, talc goes to the top and the</p>
<p style="text-align: right;">55</p> <p>1 report the results in the numbers of fibers found, if 2 any, in that one cc, and that's the standard reporting 3 method for that. 4 Q I want to talk to you a little bit about this 5 idea of scientific integrity and then I want to -- 6 THE COURT: Before you move on to scientific 7 integrity, we're going to talk a morning break now. 8 MS. COOPER: Yes, your Honor. 9 THE COURT: Members of the jury, we're taking 10 the morning break now. Please leave your notebooks 11 here. Do not discuss anything in relation to the case, 12 including the testimony that you've heard. No research 13 of any kind whatsoever. 14 Enjoy your break. Be ready to come back 15 upstairs at 10:45. Thank you. Enjoy your break. 16 (Jury exits.) 17 THE COURT: Dr. Longo, you may step down. 18 See everyone at 10:45. 19 (Recess: 10:31 a.m. to 10:50 a.m.) 20 COURT OFFICER: Jury entering. 21 (Jury enters.) 22 THE COURT: Please be seated. Make sure cell 23 phones are turned off. 24 Thank you. Miss Cooper, you may continue. 25 MS. COOPER: Thank you, your Honor.</p>	<p style="text-align: right;">57</p> <p>1 amphibole minerals go to the bottom. And then you take 2 that tube and I call it harvest, you harvest the bottom 3 tip and analyze that. 4 So now you have separated out and you have 5 concentrated the amphibole minerals you're interested 6 in at the bottom so you greatly increase your 7 analytical sensitivity. That's it in a nutshell. 8 Q Just clear as mud, a little nutshell. 9 All right. We're going to go back to that 10 and kind of explain a little bit more, but before we do 11 that, let's talk about scientific integrity. 12 So first of all, you're a scientist. Is that 13 correct? 14 A Yes. 15 Q And is it your job to just kind of call it 16 the way you see it? 17 A Yes. 18 Q Is it your job to report it if you do see it? 19 A Yes. 20 Q Is that good science? 21 A It is. 22 Q So we heard a lot of testimony from our fact 23 witness yesterday, Dr. Hopkins, saying I've never seen 24 confirmed positive asbestos tests. So my first 25 question is, as a scientist, can you explain the idea</p>

<p style="text-align: right;">58</p> <p>1 of confirming test results?</p> <p>2 A I'm not sure how to respond to that since a</p> <p>3 positive asbestos test is positive. It shows it's</p> <p>4 there. Now, you can go back later and somebody in QC</p> <p>5 can verify. But when we do asbestos analysis and we</p> <p>6 have a positive test, we report it as positive. And</p> <p>7 this is how we did it and it's positive and we've done</p> <p>8 that for 30 years. So it's unclear why you have to</p> <p>9 confirm a positive test.</p> <p>10 Now, you may want to confirm it's positive in</p> <p>11 XRD and you'd have to see if it's got fibers or not.</p> <p>12 But if you're doing TEM analysis or PLM analysis that</p> <p>13 should be all you need, except for maybe all the</p> <p>14 assurance, say like 10 percent of the samples, but</p> <p>15 that's it. I don't understand quite that comment.</p> <p>16 Q So really is the first result, is that a</p> <p>17 valid scientific finding if you find asbestos?</p> <p>18 A Yes. If you're using the proper tool that can</p> <p>19 tell you if it's asbestos or not, that is a valid test.</p> <p>20 Q So do you need a bunch of other labs to come</p> <p>21 and confirm that you saw what you saw?</p> <p>22 A No. As long as you have a quality control program</p> <p>23 in place which usually calls for 10 percent of the</p> <p>24 samples, in some cases. But every positive test by</p> <p>25 either PLM or transmission electron microscopy, you do</p>	<p style="text-align: right;">60</p> <p>1 can comment on that or not.</p> <p>2 Q What about this; do you know if the FDA</p> <p>3 actually did testing themselves?</p> <p>4 A FDA typically does not do their own testing. They</p> <p>5 have sent cosmetic talc samples to be tested under</p> <p>6 contract. Back in the mid, early to mid 1970s,</p> <p>7 Dr. Levin had a contract to do that analysis, and as</p> <p>8 recently as 2009 and 2010 they put a contract out, I</p> <p>9 think four laboratories bid on it, and it was given to</p> <p>10 the lowest bidder is my understanding, the AMA. So</p> <p>11 they don't do their own testing.</p> <p>12 Q So I have here, we know that the FDA</p> <p>13 regulates lots of things. Quite a busy organization.</p> <p>14 I've got a few listed here. So food, dietary</p> <p>15 supplements, drugs, that sort of thing.</p> <p>16 MR. DUBIN: Your Honor, I'm going to object.</p> <p>17 It's beyond the witness's qualifications.</p> <p>18 THE COURT: Absolutely. The witness is not</p> <p>19 here to discuss FDA regulations in relation to this, so</p> <p>20 let's on, please.</p> <p>21 BY MS. COOPER:</p> <p>22 Q Dr. Longo, do you know if they have any</p> <p>23 regulations of talc?</p> <p>24 MR. DUBIN: Same objection.</p> <p>25 THE COURT: Objection is sustained.</p>
<p style="text-align: right;">59</p> <p>1 not have all those samples confirmed. That's not how</p> <p>2 it's done.</p> <p>3 Q We also heard yesterday a lot about the idea,</p> <p>4 you mentioned the concentration method, the idea that</p> <p>5 the FDA rejected the concentration method. Okay.</p> <p>6 So first of all, do you know if the FDA</p> <p>7 actually regulates asbestos testing at all?</p> <p>8 A FDA does not regulate asbestos in cosmetic talc.</p> <p>9 They don't have any regulation for that.</p> <p>10 Q And do you know, is asbestos testing</p> <p>11 self-regulated or self-testing? What does that mean?</p> <p>12 A It means that the, for that it's self-regulating</p> <p>13 means it's up to whoever's regulating the cosmetic talc</p> <p>14 to police themselves, so to speak.</p> <p>15 Q And when you say, "police themselves," so</p> <p>16 they find the test, are they supposed to report it to</p> <p>17 the FDA?</p> <p>18 A I don't think so. I'm not aware of that, if that</p> <p>19 is a requirement of any sort.</p> <p>20 Q Would you say that was a moral requirement</p> <p>21 they should report it?</p> <p>22 A I don't like to get into moral aspects of it, so I</p> <p>23 can't really comment that it's a moral obligation.</p> <p>24 That's something for Johnson & Johnson to make that</p> <p>25 decision what they want to do or not. I don't think I</p>	<p style="text-align: right;">61</p> <p>1 BY MS. COOPER:</p> <p>2 Q Let's get down our road, Dr. Longo.</p> <p>3 The next thing I want to talk about is good</p> <p>4 testing versus bad testing. Okay?</p> <p>5 A Yes.</p> <p>6 Q First off, we talked about the different</p> <p>7 tests and how they have different methods of detection.</p> <p>8 Are the best tests efficient in finding the asbestos?</p> <p>9 A I mean, the best test or the best procedure gives</p> <p>10 you the higher ability to detect asbestos, higher and</p> <p>11 higher in sensitivity, so it's a matter of keep working</p> <p>12 on those analytical sensitivities to keep improving</p> <p>13 them.</p> <p>14 Q If you're trying to find asbestos is it</p> <p>15 important to have a sensitive test?</p> <p>16 A Yes.</p> <p>17 Q If you don't have a sensitive test are you</p> <p>18 going to find asbestos at low levels?</p> <p>19 A If the concentration is below the analytical</p> <p>20 sensitivity of the method you're using, then you reduce</p> <p>21 the chances of actually finding the asbestos, if it's</p> <p>22 present. So if you have a method that has a very, we</p> <p>23 call it low, but a poor analytical sensitivity, then if</p> <p>24 there's asbestos present at a little concentration, you</p> <p>25 won't see it.</p>

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<p style="text-align: right;">62</p> <p>1 So you want the methods that give you the</p> <p>2 best analytical sensitivity for the tool. And it's all</p> <p>3 about sample preparation. The microscopes don't change</p> <p>4 much. You can enhance them somewhat, like for the</p> <p>5 polarized light microscopy work we do in our lab, but</p> <p>6 the TEMs don't really change that much. It's all about</p> <p>7 how you prepare the sample to get the best analytical</p> <p>8 sensitivity.</p> <p>9 Q So I want to talk to you about what Johnson &</p> <p>10 Johnson did. Do you know how they went about testing</p> <p>11 their talc?</p> <p>12 A Yes.</p> <p>13 Q Can you tell me, what was that?</p> <p>14 A They used XRD, x-ray diffraction, they have used</p> <p>15 polarized light microscopy, PLM, and they have used</p> <p>16 transmission electron microscopy, and they use the</p> <p>17 U.S.P. method. They've actually used infrared which is</p> <p>18 not a technique that's recognized by anybody other than</p> <p>19 U.S.P. for detecting asbestos.</p> <p>20 Q We've heard a little bit about what's called</p> <p>21 the J4 method. Do you know what that is?</p> <p>22 A Yes. That's the, essentially it's XRD primarily,</p> <p>23 but it's infrared XRD and PLM.</p> <p>24 Q And can you tell me who developed the J4-1</p> <p>25 method?</p>	<p style="text-align: right;">64</p> <p>1 MS. COOPER: Your Honor, at this point</p> <p>2 plaintiffs offer 7275. Tendering to defense counsel</p> <p>3 for examination.</p> <p>4 MR. DUBIN: No objection.</p> <p>5 THE COURT: So admitted.</p> <p>6 BY MS. COOPER:</p> <p>7 Q So, Dr. Longo, do you recognize this to be</p> <p>8 the J4-1 method?</p> <p>9 A Yes.</p> <p>10 Q You mentioned a few of the test methods that</p> <p>11 we just mentioned, right; XRD, which was what we talked</p> <p>12 about, sample larger samples. And we talked about</p> <p>13 optical microscopy. Is that PLM?</p> <p>14 A PLM and dispersion staining, which is part of the</p> <p>15 polarized light microscopy technique.</p> <p>16 Q So first of all, you talked about the</p> <p>17 first -- first, do you find this to be a reliable</p> <p>18 method for testing talc?</p> <p>19 A Yes and no.</p> <p>20 Q What do you mean by yes and no?</p> <p>21 A For industrial talc where the concentrations of</p> <p>22 asbestos can be fairly high, these techniques will</p> <p>23 work. I wouldn't stop at a negative on X-ray</p> <p>24 diffraction because of poor sensitivities, but you can</p> <p>25 usually determine in industrial talcs by PLM, but if</p>
<p style="text-align: right;">63</p> <p>1 A I think it was the Cosmetic Toilet -- CTA, as well</p> <p>2 as Johnson -- I think Johnson & Johnson was involved in</p> <p>3 that, too.</p> <p>4 Q So you just said C --</p> <p>5 A I can't think of all the acronyms.</p> <p>6 Q It's CTFA.</p> <p>7 A That's it.</p> <p>8 Q Do you know what that is?</p> <p>9 A It's a cosmetic, you know, talc association. They</p> <p>10 call it cosmetic, toiletries and a couple other things.</p> <p>11 It's sort of an organization designed for the cosmetic</p> <p>12 company, cosmetic industry.</p> <p>13 Q I'm going to put down here cosmetic,</p> <p>14 toiletries, and I think it's actually fragrance</p> <p>15 association.</p> <p>16 A Thank you.</p> <p>17 Q There's a lot of acronyms in this.</p> <p>18 So you said that basically they are the</p> <p>19 industry group?</p> <p>20 A Yes.</p> <p>21 Q And was Johnson & Johnson a member of that?</p> <p>22 A Yes.</p> <p>23 Q So you mentioned that they used kind of a</p> <p>24 combination of our different test methods that we just</p> <p>25 talked about, so I want to talk to you about that.</p>	<p style="text-align: right;">65</p> <p>1 it's negative you need to go further in my opinion to</p> <p>2 TEM. For cosmetic talcs, no, I don't believe this is a</p> <p>3 reliable method.</p> <p>4 Q Okay. So I want, and actually have, I</p> <p>5 thought about this, and I mentioned in opening, the</p> <p>6 idea of sensitivity. And I got a bathroom scale here.</p> <p>7 Okay?</p> <p>8 So you talked about XRD and the sensitivity</p> <p>9 that XRD has and you said it's not very sensitive. So</p> <p>10 if I am trying to find something really small. And I</p> <p>11 guess there's asbestos in this, hopefully really small.</p> <p>12 If we're trying to find something as small as a needle</p> <p>13 is something like this bathroom scale, is it going to</p> <p>14 pick up something like a needle?</p> <p>15 A No. It's not sensitive enough. It's not</p> <p>16 designed -- it's not sensitive enough to weigh a</p> <p>17 needle.</p> <p>18 Q So go ahead and try. Turn this on here. So</p> <p>19 this measures in what, pounds?</p> <p>20 A Pounds. Sometimes it will do kilograms if it's</p> <p>21 one of the new ones. So you can see the sensitivity</p> <p>22 there is .0, so it's sensitive down to maybe a tenth of</p> <p>23 a pound or two-tenths of a pound maybe.</p> <p>24 Q All right. So if I have this needle and I</p> <p>25 just put it on here, all right, so I got nothing?</p>

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<p style="text-align: right;">66</p> <p>1 A Correct.</p> <p>2 Q Does that mean the needle's not there?</p> <p>3 A No. It means your test method is not sensitive</p> <p>4 enough to see that you have a needle present by just</p> <p>5 weight.</p> <p>6 Q Okay. So when we're talking about</p> <p>7 sensitivity and test methods if we're using XRD, if</p> <p>8 Johnson & Johnson first put things on XRD and it said,</p> <p>9 sorry, there's no needle, what did they do?</p> <p>10 A They stopped. They didn't go any further.</p> <p>11 Q So with theirs, and I'm going to write</p> <p>12 bathroom scale here so that we keep it in mind. If it</p> <p>13 doesn't pick up the needle on the bathroom scale they</p> <p>14 would stop. Why is that a problem?</p> <p>15 A Because the sensitivities are so bad. If it still</p> <p>16 could be present at just a lower weight percent than,</p> <p>17 say, I think then it was .3 or .5 was the detection</p> <p>18 limit, and you can have something there --</p> <p>19 Q You said .3 or .5?</p> <p>20 A I think that was their detection limit back when</p> <p>21 that was being done in 1975. The XRDs are better</p> <p>22 today. But you can have a .1 percent detection limit,</p> <p>23 .1 percent in the sample, and if you equate that to the</p> <p>24 amount of fibers and bundles of asbestos it takes to</p> <p>25 get to .1, that's tens to hundreds of millions at .1.</p>	<p style="text-align: right;">68</p> <p>1 detect, at least in our laboratory now, down to less</p> <p>2 than .1 percent. But the usual method for doing PLM</p> <p>3 analysis is not that sensitive. So if you were finding</p> <p>4 .3 to .5 percent by XRD, you shouldn't have any trouble</p> <p>5 looking at it and determining it, unless it's less than</p> <p>6 .1 of the fibrous part. And then that method would not</p> <p>7 be able to see it unless you did a lot more to the</p> <p>8 microscope to get at that sensitivity.</p> <p>9 Q So if they weren't able to, say, find it on</p> <p>10 PLM, so it was enough to get past the bathroom scale,</p> <p>11 got to PLM, if they weren't able to find it on PLM what</p> <p>12 would they do?</p> <p>13 A They would call it pass. There's nothing there.</p> <p>14 Q So again, was this a good way to find</p> <p>15 asbestos, especially at low levels?</p> <p>16 A If you have very low levels, no. It has a problem</p> <p>17 with sensitivities. And it has problems with</p> <p>18 resolution of certain size asbestos fibers. The PLM is</p> <p>19 very good at finding what I say is a portion of these</p> <p>20 samples that are very big bundles of asbestos. It's</p> <p>21 not very good when you have single fibers. It can't</p> <p>22 really see them. If you see them it can't do the</p> <p>23 wavelength analysis to positively identify what's</p> <p>24 present. Through the polarized light and dispersion</p> <p>25 staining.</p>
<p style="text-align: right;">67</p> <p>1 Q So it would be like I have to put on, say,</p> <p>2 boxes and pounds of needles before we even get it to</p> <p>3 even register?</p> <p>4 A Yeah. You'd have to start putting a lot more</p> <p>5 needles on there.</p> <p>6 Q All right. So we have that test. And if</p> <p>7 they didn't find it then -- or say they did. So they</p> <p>8 would have, say, the boxes and pounds of needles on the</p> <p>9 bathroom scale. What happened next?</p> <p>10 A Well, if it was positive and then they would go to</p> <p>11 optical microscopy to see if it was fibrous or not.</p> <p>12 Because remember, XRD can't tell you anything about the</p> <p>13 crystalline habit, is it fibrous, is it a geode, is it</p> <p>14 cubes, is it, call it massive which is just essentially</p> <p>15 pieces of rock.</p> <p>16 Q Right.</p> <p>17 A So then you would use the optical microscope to</p> <p>18 verify that if it was fibrous or not.</p> <p>19 Q So once they got to PLM, we talked a little</p> <p>20 bit about PLM. Is there issues still when you get to</p> <p>21 this section about whether or not you will be able to</p> <p>22 find the asbestos?</p> <p>23 A Well, yes and no.</p> <p>24 Q Okay. Could you explain?</p> <p>25 A On the yes part, you can design a PLM analysis to</p>	<p style="text-align: right;">69</p> <p>1 Q So you said it's hard to find single fibers</p> <p>2 on PLM?</p> <p>3 A You can't. You can't -- you may see them, but you</p> <p>4 can't do the different -- the different wavelengths of</p> <p>5 light and polarizing that actually identify it because</p> <p>6 of the colors and the size of the wavelengths. So it</p> <p>7 falls apart down at the smaller end of the width of the</p> <p>8 asbestos fibers.</p> <p>9 You can see big bundles. We routinely see</p> <p>10 that in our laboratory with these types of analysis</p> <p>11 now. But it has a very hard problem, well, it's almost</p> <p>12 impossible to see single fibers that -- where you can</p> <p>13 identify it, not just that you see it.</p> <p>14 Q So we heard a lot about the fact that that</p> <p>15 wasn't where Johnson & Johnson stopped. They also did</p> <p>16 TEM. So can you tell us, does that solve the problem?</p> <p>17 If we do TEM, if we moved on from this, and it got a</p> <p>18 pass or a fail based on this, and they did TEM, what's</p> <p>19 the problem then? Can you find asbestos using TEM?</p> <p>20 A You can. The TEM is, in my opinion, the best</p> <p>21 method, the most sensitive method for positively</p> <p>22 identifying asbestos at these low concentrations. But</p> <p>23 the TEM itself can't do it unless you prepare the</p> <p>24 sample properly. It's all about sample preparation.</p> <p>25 If you prepare the sample and the analytical</p>

<p style="text-align: right;">70</p> <p>1 sensitivity is very bad, you're still going to miss the 2 asbestos. If you use the appropriate preparation 3 method to increase that analytical sensitivity, then 4 you can get to very good detection limits or analytical 5 sensitivity. It's all about the sample preparation. 6 It's not the TEM that's the problem. It's the sample 7 preparation that dictates everything that happens in 8 that TEM.</p> <p>9 Q I like to think of TEM kind of like this 10 jeweler scale, right?</p> <p>11 A It's a lot more expensive.</p> <p>12 Q The microscope.</p> <p>13 So we couldn't pick up our needle on our 14 bathroom scale. But if this is TEM, is it going to 15 pick up this needle, right?</p> <p>16 A That should have the sensitivity for one needle, 17 yes. It's essentially 242 milligrams.</p> <p>18 Q More sensitive, right? Put on two needles?</p> <p>19 A It is sensitive enough to pick up and show you the 20 weight of those particular two needles. So the 21 analytical sensitivity for how much it weighs has been 22 increased so that you can weigh smaller and smaller 23 things.</p> <p>24 Some of these, some of these scales we have, 25 we have one that can measure down to two to three</p>	<p style="text-align: right;">72</p> <p>1 A It still has a sensitivity issue, because in order 2 to find the needles, say you have needles in a 3 haystack, take away from the scale; if you have the 4 needles in the haystack and you go and grab some of the 5 hay, your chances are you may not grab the hay with the 6 needles in it.</p> <p>7 If you can remove the hay and just leave the 8 needles, it now increases your ability or increases 9 your, we'll call it analytical sensitivity to find the 10 needles 'cause you've gotten rid of the hay. So, and 11 then you go into the TEM. It's all about the method.</p> <p>12 Q I've got us a demonstrative here again.</p> <p>13 We're talking about if we have this, and this is talc, 14 and if we have a needle that's in this haystack, what's 15 wrong with just using this teeny little scale to try 16 and find the needle in this haystack?</p> <p>17 A You can't analyze the whole haystack. You can't 18 analyze all the talc in one bottle. Trying to analyze, 19 say, an eight-ounce or ten-ounce bottle of cosmetic 20 talc, say, container, every bit of material in there 21 may take you a few hundred years to do that.</p> <p>22 Q Wait. A little bottle like this. Do you 23 know how long it would take Johnson & Johnson to test a 24 bottle this size on something little and teeny like 25 their TEM?</p>
<p style="text-align: right;">71</p> <p>1 micrograms. But you can't take that into the lab, in 2 here. It has to be on a vibration free table. If you 3 don't, you can walk by it and it'll move it so, just 4 because of the vibration coming from your feet walking 5 on the floor.</p> <p>6 Q So we heard Johnson & Johnson went beyond and 7 did TEM. I guess, have you actually looked at their 8 procedure?</p> <p>9 A Yes. And again, TEM is a very good tool. It's 10 the sample preparation is the problem.</p> <p>11 MS. COOPER: And, your Honor, at this time 12 plaintiff offers 5781. Tendering to defense counsel 13 for examination.</p> <p>14 MR. DUBIN: No objection.</p> <p>15 MS. COOPER: Your Honor, may I approach?</p> <p>16 THE COURT: Yes.</p> <p>17 BY MS. COOPER:</p> <p>18 Q Dr. Longo, I'm going to hand you Plaintiff's 19 5781. Can you tell me what that is?</p> <p>20 A This is Johnson & Johnson's TEM 7024 method and 21 this one is a 1995 issue. And it is their TEM method.</p> <p>22 Q Okay. Now, you said that, so TEM is 23 sensitive enough to actually find the needles, right? 24 You were able to show that. So what's wrong with just 25 doing this procedure?</p>	<p style="text-align: right;">73</p> <p>1 A The preparation method used for a bottle that 2 size, to analyze all the talc in there by TEM is 3 approximately almost four years of one person, one 4 microscope. If you had four microscopes and they 5 worked every day, it would only take you one year.</p> <p>6 Q So essentially, with their TEM procedure, are 7 they just pinching off teeny bits of this haystack and 8 putting it on the teeny tiny scale to try to figure out 9 if there's a needle in it?</p> <p>10 A That's correct. They're not concentrating the 11 needles. And that would be for every lab. Any lab who 12 used a -- if you don't have a method for increasing the 13 concentration or not using it, every TEM lab would have 14 the same problem. You either concentrate the sample or 15 instead of looking at, say, 10 or 20 grid openings you 16 look at a thousand grid openings. And even then you 17 can't get close to the analytical sensitivity unless 18 you remove the hay.</p> <p>19 Q Okay. So let's actually jump ahead a little 20 bit and let's talk about this concentration method 21 'cause we keep talking about removing the hay. So 22 let's talk about that.</p> <p>23 What do you mean and how can we concentrate 24 this where we can actually find needles if there was 25 needles in this haystack?</p>

<p style="text-align: right;">74</p> <p>1 A If you have needles in that haystack and I would 2 get a very large container that would hold that, I'd 3 fill it up with water and I would throw all that hay in 4 there, stir it up. The hay will primarily float and 5 the needles will go to the bottom. I'd scoop all that 6 hay off there and then I would take that water and 7 filter it and see the needles. 8 I would concentrate the needles by removing 9 the hay. The concentration method does the exact same 10 thing on a different scale, of course. Put the talc in 11 the heavy liquid density material, put it in a 12 centrifuge, spin it around, talc goes to the top. The 13 amphibole asbestos minerals goes to the bottom. It's 14 heavier, the talc is lighter. And then you get rid of 15 the talc, remove that small portion at the bottom of 16 the centrifuge tube, filter it, see what's there. 17 That increases the sensitivity because I've 18 taken it from being all spread out in that sample of 19 talc to being in the bottom of the centrifuge tube. It 20 increases your analytical sensitivity. It increases 21 your ability to detect asbestos at a much lower -- much 22 higher analytical sensitivity which is lower amounts of 23 asbestos fibers per gram of talc. 24 There's a big wide difference in analytical 25 sensitivity A, after the heavy liquid density</p>	<p style="text-align: right;">76</p> <p>1 much pasketti -- spaghetti. I sound like my kids a 2 long time ago. 3 Q I was going to say, I'm like, oh, you have 4 kids. 5 A Long time ago. 6 But if I take the noodles, so I don't 7 mispronounce it again, and spread it all out, so 8 they'll dilute it and dilute it and dilute it so they 9 can see if there's a meatball there. Concentration 10 method gets rid of the spaghetti and you can see that 11 there's a meatball. 12 So it's two different techniques. If you use 13 the method B, you have to dilute the sample really far. 14 And if you use method A, you can look at the whole 15 sample that method B was starting with, but have it 16 diluted. 17 Q Did Johnson & Johnson ever use the 18 concentration method? Have they ever adopted the 19 testing method? 20 A No, they didn't. 21 Q Do you know if they knew about it, though? 22 A Yes, they did. 23 Q So we've already seen this exhibit. It's 24 Plaintiff's Exhibit 7. It's from Colorado School of 25 Mines. Do you know who they are?</p>
<p style="text-align: right;">75</p> <p>1 separation, and analytical -- the amount of fibers and 2 bundles you need to get in order to see it in sample B. 3 It's a wide gulf between the two. 4 Q So if I am understanding you correctly, 5 basically if there's needles in this haystack, get rid 6 of the hay and concentrate it down. I was thinking of 7 orange juice concentrate, right? If it's just the 8 concentrate. We concentrate it down. 9 So are we actually testing concentrate 10 instead of just testing a teeny bit and putting it on 11 the scale? 12 A Correct. We're removing -- we're still testing 13 small amounts. We -- both procedures start off with 14 about the same amount. Procedure B has to dilute that 15 talc, dilute that sample so the talc doesn't pile up in 16 the TEM. TEM is not good if you have things piled on 17 top of each other. Electron beam can't go through it. 18 Like X-rays, you know, if you took an X-ray 19 of like five hands on top of each other, nobody's going 20 to be able to see through it. And if you're looking 21 through this with the other hands on top, TEM's the 22 same way. So they have to dilute it really a lot to 23 count it. 24 Think of a bowl of spaghetti. If there's a 25 meatball in there at the bottom, you can't tell. Too</p>	<p style="text-align: right;">77</p> <p>1 A Yes, I do. 2 Q Looks like they wrote to Johnson & Johnson 3 and they said, "As the impurity level becomes very low" 4 -- and would you agree that the impurity level is low 5 in Johnson & Johnson Baby Powder? 6 A I would agree. 7 Q -- "it is necessary to examine increasingly 8 larger amounts of sample in order to detect the 9 impurity." 10 So if we're concentrating this haystack down, 11 is that allowing you to test a larger sample? 12 A Yes. 13 Q "As a result of the requirement to detect the 14 proverbial needle in a haystack," right, "we have 15 evolved a procedure which pre-concentrates the 16 impurities prior to examination." 17 So again, we got this from Johnson & Johnson. 18 They knew about that method. 19 A That's correct. They did. 20 Q Also looking at page 4, it says, "Based on 21 past experience with detecting and identifying minerals 22 when present at low levels, a concentration of the 23 phases to be detected was considered essential." 24 Would you consider it essential that you need 25 to concentrate the haystack down to find the needles?</p>

20 (Pages 74 to 77)

<p style="text-align: right;">78</p> <p>1 A Yes. It's the only way to get a reasonable 2 detection limit or analytical sensitivity. 3 Q Have you ever heard of Professor Pooley? 4 A I have. 5 Q Who is he? 6 A Geologist. Dr. Pooley did a lot of the early work 7 on cosmetic talc and analysis of it. 8 Q Okay. Have you seen, this is Plaintiff's 9 Exhibit 51 already in evidence. 10 Have you seen this document, this perspective 11 -- proposed specs for analyzing talc for asbestos? 12 A I have. 13 Q Have you seen that they find, Pooley, .05 of 14 the tremolite type in Vermont. Have you seen that 15 finding before? 16 A Yes. Using the pre-concentration method. 17 Q This is for asbestos, right? Says right 18 there on the cover? 19 A Yes. 20 Q Now, looking at page 5 of the document says, 21 "Pre-concentration of asbestos followed by X-ray 22 diffraction analysis." 23 So was Dr. Pooley using, concentrating down 24 and using TLM, or what exactly was he doing? 25 A In this particular case he was using XRD, but he</p>	<p style="text-align: right;">80</p> <p>1 A You have to. 2 Q To be clear, does Johnson & Johnson use 3 concentration technique now? 4 A Not that I'm aware of. 5 Q So they're still using the method, we looked 6 at it briefly, this is 5781, and we'll talk a little 7 bit more about this, but TEM 724? 8 A Correct. 9 Q They're still using pinch off the bit and put 10 it on a scale? 11 A Correct. They're putting it on a scale and 12 diluting it so that your chances of getting the needle 13 on the scale, if it's at very low concentrations, is 14 very low. 15 Q So I want to talk a little bit about what 16 part of this, so have you, you've reviewed this TM 17 7024. Can you tell me, what's its level of detection? 18 A Well, it has a level of detection, it's 19 interesting because they do their level of detection in 20 weight percent. So they say for chrysotile, their 21 level of detection is 1.1 times ten to the minus 14. 22 Q Okay. 23 A Which is, let's see, billions -- 78 -- trillion is 24 10, 11, 12, so that would be in the quad -- that would 25 be in the trillionths of a percent detection limit.</p>
<p style="text-align: right;">79</p> <p>1 was pre-concentrating the minerals first before it went 2 into the XRD. So that he was increasing the 3 sensitivity so that XRD normally cannot detect 0.05 4 percent tremolite unless you concentrate it and then 5 you can get to these higher sensitivities. 6 Q So here it says, "The second technique 7 developed also by Dr. Pooley involves 8 pre-concentration," like we've been talking about, "of 9 tremolite in talc," different procedure following XRD, 10 which is what we just discussed. 11 It says, "This technique has not been written 12 up yet, but evidently when applied to Vermont talc, 13 0.5 -- .05 percent of the tremolite type is found. 14 Limitation of this method is that it may be too 15 sensitive." 16 Dr. Longo, is there any analytical reason you 17 would not want your talc asbestos test to be sensitive? 18 A No. It doesn't make any sense to me to have 19 something you would label as too sensitive for this 20 type of work. We've been working on this now for two 21 years and that's, everything we do in our research in 22 this is to keep lowering the analytical sensitivity. 23 Doesn't make any sense to me. 24 Q If you want to find the asbestos, are you 25 going to use the most sensitive technique you can?</p>	<p style="text-align: right;">81</p> <p>1 And then they say, and the same thing for amphiboles, 2 that it's ten to the minus 14. But it's sort of a 3 switch and bait type thing, because that detection 4 limit is based on finding one made up hypothetical 5 fiber. So that you pick any fiber size you want and 6 then you do a mathematical equation to determine weight 7 'cause you can't weigh one fiber. 8 It's in picograms. So you have micrograms, 9 you have nanograms and then you get to picograms. So 10 it would be milligrams, micrograms, nanograms, 11 picograms. So you have to do a calculation, and the 12 calculation is determining the volume of a cylinder, 13 which is Pi times the length times the width of the 14 cylinder squared, and then you just add in the density. 15 So you're not really ever detecting it. 16 You're just saying if this one fiber was present, this 17 really small individual fiber, this would be my 18 detection limit at weight percent. What they leave out 19 there, in order to find that one fiber you have to have 20 a certain number of fibers in bundles or certain 21 numbers of needles in a haystack to find the one. So 22 it's sort of a made-up detection limit. 23 Q And that's what we're kind of seeing, that's 24 what we're seeing on page 2 here when we talk about 25 limit of quantifiable detection?</p>

21 (Pages 78 to 81)

<p style="text-align: right;">82</p> <p>1 A Correct. If you do the math and calculate the 2 level of detection for that one fiber or bundle, this 3 method is at approximately 12 million fibers or bundles 4 per gram and that's how much you would have to have in 5 the talc in order to find that one theoretical fiber. 6 Q So it says, "Detection of five or more 7 asbestiform minerals of one variety in an analysis 8 constitutes a quantifiable level of detection." So 9 that's what you were just talking about. You have to 10 find five in order to count it? 11 A No. Not really. In order to find one of the five 12 you have to have at least 12 million there. If you're 13 now saying that I have to have five before I'm going to 14 count it, you just take 12 million and multiply by five 15 which gets you in the, let's see, 50, 60, 70, 80 16 million fibers per gram before you're going to say yes, 17 it's quantifiable. 18 That's only for one type. If you have 19 another type of amphibole asbestos in there you need 20 another five to report that. So it's very, you have to 21 have an awful lot of asbestos fibers in there before 22 this method allows you to say yes, it's present. 23 Q Did you actually prepare a little 24 demonstrative for us? 25 A Yes.</p>	<p style="text-align: right;">84</p> <p>1 found in the past, this is the concentrations you would 2 have to have on the right-hand side before that method 3 says it's quantifiable or reported as positive. 4 Q Okay. So just so we're clear, we have four, 5 say, tremolite fibers. That wouldn't -- they would not 6 be counting those under this method? 7 A They would say -- they have to count them. They 8 have to report them. 9 Q Right. 10 A But they would say it's not five so it's not 11 quantifiable. 12 Q And that means that you can end up with 56 13 million fibers and it still not be quantifiable? 14 A In a gram of J&J talcum powder. Correct. 15 Q Same thing if you found, say, four tremolite 16 or four anthophyllite, you could end up with 113 17 million fibers and it's still considered not 18 quantifiable under this method? 19 A Correct. 20 Q Can you tell us a little bit, when it comes 21 to the TEM 7024, about the process of lengths? 22 A Yes. They run a, as I recall, trying to find 23 where it is, they run a -- they call it background 24 correction. 25 Q Okay. Is that what we're looking at on page</p>
<p style="text-align: right;">83</p> <p>1 Q All right. 2 MS. COOPER: Plaintiff's Exhibit 8410. 3 Tender to defense counsel. For demonstrative purposes 4 only, your Honor. 5 MR. DUBIN: No objection to demonstrative 6 purposes. 7 THE COURT: Go right ahead. 8 BY MS. COOPER: 9 Q So again, this was for demonstrative purposes 10 looking at detection of five or more asbestiform 11 materials. Help me understand, what is this chart and 12 what you're trying to explain? 13 A I was trying to explain on the left-hand side in 14 the TEM analysis if you counted in, there are ten grid 15 openings, for tremolite fibers, the amount of tremolite 16 fibers in the actual sample, finding that four, would 17 be 56 million fibers per gram. 18 And they would say that is unquantifiable. 19 Can't count it. Because again, you're looking at a 20 little bit of the material that, all TEM analyses do 21 that. You have to assume it's homogeneous throughout 22 the whole sample that it's going to be the same 23 concentration. 24 And then as you increase the factors of four, 25 and all these types of asbestos have been found and</p>	<p style="text-align: right;">85</p> <p>1 3 here? 2 A No. It's actually -- that's -- yeah. Page 3 of 3 6. 4 Q Okay. So why do you use a blank? 5 A Well, we use a process blank. We do that with 6 every batch of samples we run. So when we're doing the 7 heavy liquid density method, we run a sample just like 8 the one with the talc but without the talc. So it has 9 the heavy liquid in there, it goes through the whole 10 process of spinning it, putting it on a filter, and 11 then we analyze it to make sure there is no cross 12 contamination in our laboratory. We are dealing with 13 very low amounts. 14 And so it's analyzed the exact same way. And 15 all our process blanks for the last, I don't know how 16 many years, have always been negative for asbestos. So 17 that our background is zero. So our analytical 18 sensitivity is one fiber or one bundle. 19 Here we have, I'm saying, in background 20 correction, and they state exactly what they do. 21 Q Okay. And it says, "As of the time of this 22 writing, background correction has not been necessary. 23 The amount of background asbestos detected has been 24 insignificant in comparison to the levels of asbestos 25 found in contaminated samples."</p>

22 (Pages 82 to 85)

<p style="text-align: right;">86</p> <p>1 Why is that curious?</p> <p>2 A Because the whole point of having at least five</p> <p>3 fibers or five bundles before you say it's quantifiable</p> <p>4 is to take in account, quote, this background</p> <p>5 contamination that must be on a filter.</p> <p>6 So on the one hand if you're contaminating</p> <p>7 your filter with background from the lab, you should</p> <p>8 fix that. But on the other hand, why are you using at</p> <p>9 least five fibers to correct for background when your</p> <p>10 own protocol says background is not negligible, you</p> <p>11 don't have to worry about it. I don't understand that.</p> <p>12 Q So essentially they're saying all these</p> <p>13 fibers that could happen are background, but they're</p> <p>14 not changing and they're saying that it's been</p> <p>15 insignificant?</p> <p>16 A That's what their protocol says.</p> <p>17 Q Why is that a problem?</p> <p>18 A If you're correcting for background and don't have</p> <p>19 any background that means those four fibers has to come</p> <p>20 from the sample itself, not from background that</p> <p>21 doesn't exist. You can't have it both ways. It's</p> <p>22 either there or it's not. If it's not there then</p> <p>23 you're essentially accounting for something that is</p> <p>24 false.</p> <p>25 Q So last thing and then I want to shift back</p>	<p style="text-align: right;">88</p> <p>1 below our detection limit. I don't know how that's</p> <p>2 done.</p> <p>3 Q So if they're just pinching off, again, teeny</p> <p>4 amounts and putting it on this scale, the teeny tiny</p> <p>5 scale, do you believe that there is an amount of</p> <p>6 testing that would actually find the needle that would</p> <p>7 be sufficient?</p> <p>8 A Not by -- I don't know how that's done. I mean,</p> <p>9 we are taking a small amount but we're concentrating</p> <p>10 it. But to do something on that scale with TEM, it's</p> <p>11 unclear to me how you do that.</p> <p>12 Q I'm going to move back to the concentration</p> <p>13 method. So we talked about, we saw that Professor</p> <p>14 Pooley had told them about concentration method. We</p> <p>15 saw that the Colorado School of Mines heard about the</p> <p>16 concentration method or told them about it.</p> <p>17 Have you heard of Professor Blount?</p> <p>18 A I have. Excuse me, I have.</p> <p>19 Q Can you tell me, have you read her article?</p> <p>20 A I have.</p> <p>21 Q Have you relied on her article?</p> <p>22 A I have.</p> <p>23 MS. COOPER: Your Honor, at this time</p> <p>24 plaintiffs offer Plaintiff's Exhibit 60.</p> <p>25 MR. DUBIN: This has already been used as a</p>
<p style="text-align: right;">87</p> <p>1 to concentration method, about this TM 7024. We've</p> <p>2 heard a lot about composite testing, composite samples</p> <p>3 and testing. Do you know how often they were doing TEM</p> <p>4 testing on their talc?</p> <p>5 A I think it was once a quarter.</p> <p>6 Q Okay. So when we hear about every hour,</p> <p>7 every day, every single -- is that TEM testing?</p> <p>8 A No. That's all kinds of tests that they do.</p> <p>9 Microbial, how white the talc is.</p> <p>10 Q Brightness?</p> <p>11 A Brightness. There's other tests they're doing.</p> <p>12 They don't do TEM every hour. That would be</p> <p>13 impossible.</p> <p>14 Q And do you have any opinion on the amount of</p> <p>15 testing done, whether it was sufficient?</p> <p>16 A It's a very hard question to answer. I've thought</p> <p>17 a lot about this because I've been asked about it. How</p> <p>18 do you make a composite that represents tons of</p> <p>19 material? I don't think it's possible. I don't think</p> <p>20 you can test enough to say there's nothing present. I</p> <p>21 don't know how you do that of an entire silo or ton of</p> <p>22 material. Is one sample enough? No. I mean, but what</p> <p>23 is the number of samples? I'm not sure you can</p> <p>24 actually come up to something where somebody can say</p> <p>25 this batch of material, these two tons or one ton is</p>	<p style="text-align: right;">89</p> <p>1 demonstrative. I have no objection to it being used as</p> <p>2 a demonstrative. It's a study. It doesn't go into</p> <p>3 evidence.</p> <p>4 MS. COOPER: Your Honor, we would like to use</p> <p>5 it for all purposes.</p> <p>6 THE COURT: Sidebar.</p> <p>7 (Sidebar.)</p> <p>8 THE COURT: When you say -- I don't know what</p> <p>9 the record picked up. When you say, "all purposes,"</p> <p>10 you're seeking its admission into evidence?</p> <p>11 MS. COOPER: Yes, your Honor.</p> <p>12 THE COURT: The problem is we don't put</p> <p>13 treatises into evidence. We can't expect jurors to</p> <p>14 read through this document. It's beyond their chem. I</p> <p>15 mean, that's why we have the experts here. This is not</p> <p>16 within the jurors to be able to understand everything</p> <p>17 that's in here. There's things objectionable in here</p> <p>18 that have hearsay issues.</p> <p>19 But it's a treatise so you can use it, you</p> <p>20 can certainly go through it with the expert, that's why</p> <p>21 he's here, and explain and show it to this jury on the</p> <p>22 Elmo, but it's not going back to the jury room.</p> <p>23 MS. COOPER: Our issue, our only response</p> <p>24 would be it's going to notice that they had this</p> <p>25 article, that the concentration method was explained</p>

<p style="text-align: right;">90</p> <p>1 and that they were on notice that it could find 2 asbestos. 3 THE COURT: Well, you had their corporate 4 representative here and you asked him about that. But 5 even as to notice, I'm not going to allow that to go 6 back for the jury. 7 MS. COOPER: Yes, your Honor. Thank you. 8 (Sidebar ends.) 9 THE COURT: You can use this document and 10 display it, but it's not being admitted. 11 BY MS. COOPER: 12 Q So, Dr. Longo, you've seen -- this is 13 Plaintiff's Exhibit 60, Dr. Blount's article. And 14 you've seen also, I'm sure, this last page, which we 15 got from, again, the Johnson & Johnson records here 16 where she says that she found Windsor -- she found 17 asbestos in the J&J, JBP. 18 Do you believe that's the Johnson's Baby 19 Powder? 20 A Yes, it is. I believe that. 21 Q Can you explain to me what concentration 22 method she went about testing her sample of Johnson's 23 Baby Powder? 24 A She used and published her results for using the 25 heavy liquid separation concentration method on the</p>	<p style="text-align: right;">92</p> <p>1 They're using water as the liquid where they swirl the 2 small particulates in a pan and keep pouring it off and 3 the gold, because the density stays in the bottom. 4 Her method is what we talked about earlier 5 where she was separating out the talc. If the 6 minerals, the amphibole minerals in the talc, if it's 7 at the concentration you can see, it goes to the bottom 8 of the centrifuge tube. She removed the talc, took out 9 the concentrate and looked at it by polarized light 10 microscopy. Now always be known as the Blount method. 11 Q Her method is taking these two things 12 together, PLM and concentration method? 13 A Yes. Correct. 14 Q This is the Blount method. 15 A That is correct. 16 Q Now, is concentration good for detecting all 17 sorts of fibers? 18 A Not all -- not good for all types of asbestos. 19 Q Okay. 20 A So it's very good for the tremolite solid solution 21 series, it's called, because it's not just tremolite. 22 It's all a type of tremolite, but it's got different 23 names depending if little elements get incorporated to 24 when it's formed. So you have tremolite, actinolite, 25 richterite, winchite. That's all tremolite solid</p>
<p style="text-align: right;">91</p> <p>1 talc samples including Sample I, which was 2 off-the-shelf Johnson's Baby Powder -- 3 MR. DUBIN: I'm going to object to lack of 4 foundation with this witness. 5 THE COURT: Lay the foundation. 6 BY MS. COOPER: 7 Q Dr. Longo, have you read this article? 8 A I have. 9 Q And have you looked at how she went about 10 finding the asbestos that was in the Johnson's Baby 11 Powder? 12 A I have. 13 Q And have you reviewed several documents that 14 she has written and other documents that have relied on 15 her work to come to the opinions that you're expressing 16 today? 17 A Yes. 18 Q So could you, again, could you tell us how 19 her concentration method may have been different than 20 other concentration methods used in the past? 21 A Well, she used a heavy liquid density separation 22 method for minerals. That methodology has been around 23 for ages. It is a typical method for using a liquid to 24 separate different weights of minerals. 25 Panning for gold is a good example of that.</p>	<p style="text-align: right;">93</p> <p>1 solution series. Very good for that. 2 Anthophyllite solid solution series, if it 3 has iron in it it's very good for that. So you can 4 routinely find anthophyllite in their cohorts in the 5 solid solution series. 6 It is very tough to separate chrysotile 7 asbestos from talc because the weights are so close. 8 So it's not good for chrysotile asbestos. If it's in 9 the sample, using these methods you will not find it. 10 Q Okay. So I guess concentration method is 11 harder to find chrysotile, but you mentioned it can 12 find tremolite, actinolite, anthophyllite, correct? 13 A That's correct. 14 Q So are those the kinds of asbestos that are 15 more often in talc mines? 16 A Those types, the amphibole minerals are found the 17 most. So not finding chrysotile, it would be nice to, 18 but the most important to me is the amphibole minerals 19 of the tremolite series and the anthophyllite series. 20 Q Is there other ways to find chrysotile? 21 A There is other ways. You'd have to go back to 22 what I call the long method where you have to increase 23 the amount of grids or increase the PLM analysis. So 24 there is other ways. That's been found in the past. 25 But using either the Blount method or the other, the</p>

<p style="text-align: right;">94</p> <p>1 ISO method for heavy liquid density, it's very tough. 2 Heavy liquid density. 3 Q So if we know that mines are mainly 4 contaminated with these kinds of asbestos, is the 5 concentration method a good method to use to find 6 asbestos in talc? 7 A Yes. I think it's absolutely necessary. Two out 8 of three is better than zero out of three. 9 Q Dr. Longo, I want to talk to you a little bit 10 about what you actually found now. So we're going to 11 move down the road. We're going to move down the road 12 from good testing to bad testing to actually your 13 results. 14 So can you tell us, how long have you been 15 testing cosmetic talc? 16 A A little bit over two years now. 17 Q And when you test, can you tell us the kind 18 of methods that you use? 19 A We're using primarily now polarized light 20 microscopy with and without the Blount concentration 21 method. We're also analyzing by TEM, using the heavy 22 liquid concentration method. And those are the three 23 primary techniques that I feel need to be done to 24 complete, to characterize these cosmetic talcs for 25 asbestos, it's probably the best we have, you know,</p>	<p style="text-align: right;">96</p> <p>1 are exemplars of the containers that were manufactured 2 in, I think they go all the way back to the late '40s, 3 I think. They're samples of what has been manufactured 4 over the years. 5 Q So I want to talk to you just about the 6 samples that you got from the Johnson & Johnson museum. 7 Okay? That's what we're going to talk about today. 8 But before I move from that, have the samples 9 that you've gotten from plaintiffs' attorneys and eBay 10 and clients, have they been consistent, your results 11 been consistent with what you found in the historical 12 samples that you got from Johnson & Johnson? 13 A They are consistent. 14 Q Now, you have several reports, so I'm going 15 to be using them for demonstrative purposes. 16 MS. COOPER: Your Honor, at this time we have 17 several reports. It's going to be Plaintiff's Exhibits 18 161.8, 161.1, 161.7, 161.1 and 161.9. 19 MR. DUBIN: I don't have them, so if they're 20 reports I have no objection to their use for 21 demonstrative, but I'd like to know what number goes 22 with what report. 23 MS. COOPER: Absolutely. 24 BY MS. COOPER: 25 Q Dr. Longo, I'm going to be referencing this</p>
<p style="text-align: right;">95</p> <p>1 it's the best now. You've got to use heavy liquid 2 concentration. 3 Q So you said PLM and then you said PLM with 4 concentration? 5 A With heavy liquid density. Also known as the 6 Blount method. 7 Q And then you said TEM with concentration? 8 A Yes. With. 9 Q So how many tests have you done? 10 A For Johnson & Johnson containers, we're getting 11 close to 100 containers. 12 Q Okay. And when you were first starting to 13 test talc, where were you getting the talc? 14 A They were coming to us from plaintiffs' attorneys. 15 Either they purchased them on eBay or they got them 16 from collectors or they got them from their clients who 17 had kept bottles in their house. That's where they 18 came from initially. 19 Q Initially; now, have you tested other sources 20 of talcum powder? 21 A We have. 22 Q Can you tell me where is the majority of 23 samples now have you tested from? 24 A They have come from Johnson & Johnson's historical 25 museum for keeping what in scientific terms are my area</p>	<p style="text-align: right;">97</p> <p>1 and Mr. Linder here is going to be writing the number 2 on these so we can talk about each of these. But I 3 want to get just an overview. Okay? 4 THE COURT: Why don't we wait until they're 5 provided to counsel. 6 MS. COOPER: Absolutely, your Honor. 7 MR. DUBIN: They don't need to wait for me. 8 I'm happy to work with Mr. Linder if it keeps things 9 moving. 10 THE COURT: Okay. Do these have different 11 dates? 12 MS. COOPER: Yes, your Honor. 13 THE COURT: So for purposes of the record, 14 can you review those? 15 MS. COOPER: Absolutely. 16 THE COURT: Tell me the dates of the reports. 17 MS. COOPER: I'll have the November 14, 2018, 18 report as 161.8; the January 15, 2019, report as 161.1. 19 THE COURT: What was the date of that? 20 MS. COOPER: January 15, 2019. 21 THE COURT: Thank you. 22 MS. COOPER: I'm sorry, that's 161.10 23 actually. The February 1st, 2019, report as 161.7; the 24 March 11, 2018, report as 161.9; and his January 2018 25 report as 161.1.</p>

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<p style="text-align: right;">98</p> <p>1 THE COURT: January what?</p> <p>2 MS. COOPER: Sorry. That was January, it's</p> <p>3 just January 2018, your Honor.</p> <p>4 THE COURT: Thank you.</p> <p>5 MR. DUBIN: I'll just note for the record</p> <p>6 again, if they're only displaying for demonstrative</p> <p>7 purposes I'm not sure it matters, but these don't</p> <p>8 appear to be the complete reports.</p> <p>9 MS. COOPER: Your Honor, I have the full</p> <p>10 reports. Just some of them are boxes full.</p> <p>11 MR. DUBIN: And that's fine. Just for the</p> <p>12 record, what is being marked under these numbers are</p> <p>13 not the complete reports. I have no objection to them</p> <p>14 being used to keep things moving.</p> <p>15 THE COURT: That's fine. Continue.</p> <p>16 BY MS. COOPER:</p> <p>17 Q Dr. Longo -- your Honor, may I approach?</p> <p>18 THE COURT: Yes.</p> <p>19 BY MS. COOPER:</p> <p>20 Q I've gotten the beginning parts of each</p> <p>21 report because some of those, I've got in all your</p> <p>22 boxes here, but some of these reports are over 2,000</p> <p>23 pages long. But first, the report, does it give us an</p> <p>24 idea of what your results are?</p> <p>25 A Yes. It has everything except for all the backup</p>	<p style="text-align: right;">100</p> <p>1 samples, did you do 12 samples?</p> <p>2 A 12 historical, yes.</p> <p>3 Q And then you found five positives in Italian</p> <p>4 samples. Is that correct?</p> <p>5 A That is correct.</p> <p>6 Q A percentage of 42 percent from the Italian</p> <p>7 mine?</p> <p>8 A Yes.</p> <p>9 Q With Vermont you did 36 Vermont samples?</p> <p>10 A Correct.</p> <p>11 Q And you told me that you found 32 of them</p> <p>12 positive for asbestos, and that's 89 percent. Is that</p> <p>13 correct?</p> <p>14 A That is correct.</p> <p>15 Q So first of all, can you tell me, when we</p> <p>16 find positives like this, what kind of concentrations</p> <p>17 are we finding in the Johnson & Johnson Baby Powder</p> <p>18 that you tested?</p> <p>19 A Depends on the technique. For optical microscopy</p> <p>20 or PLM, I think the highest concentration we found was</p> <p>21 approximately .2 to .3 percent, to the lowest it was</p> <p>22 less than 0.1 percent. And for the TEM analysis it was</p> <p>23 a range of approximately five or 6,000 fibers per gram</p> <p>24 or fibers in bundles, and that's finding one fiber.</p> <p>25 Q I'm sorry, could you repeat that? That was</p>
<p style="text-align: right;">99</p> <p>1 data. So the answer is yes.</p> <p>2 Q So I want to talk to you about the historical</p> <p>3 samples that you got from Johnson & Johnson. Can you</p> <p>4 first tell me how many samples total that you tested?</p> <p>5 A So far to date our historical J&J samples is</p> <p>6 approximately -- is 57, we call containers. That's how</p> <p>7 we started. We got samples from those containers. But</p> <p>8 57 containers.</p> <p>9 Q Can you tell me, of these 57 containers, how</p> <p>10 many were actually positive for asbestos? And actually</p> <p>11 Dr. Longo, spoiler, you filled out that information for</p> <p>12 me yesterday?</p> <p>13 A Yes.</p> <p>14 Q So looking at that, there are 42 of them</p> <p>15 positive?</p> <p>16 A Correct.</p> <p>17 Q And you calculated that for me to be 74</p> <p>18 percent were positive for asbestos?</p> <p>19 A Correct.</p> <p>20 Q Now, we heard from Dr. Hopkins about the fact</p> <p>21 that Mr. Rimondi was exposed to both Italian and</p> <p>22 Vermont mine sources.</p> <p>23 A That is correct.</p> <p>24 Q So I had you separate out your Italian</p> <p>25 samples from your Vermont samples. So for Italian</p>	<p style="text-align: right;">101</p> <p>1 for the TEM analysis, how many was it?</p> <p>2 A On the lower side, the concentration ranged from</p> <p>3 approximately 7,000 or so fibers or bundles per gram.</p> <p>4 Q You said fibers/bundles.</p> <p>5 A And I just want to get the number straight so I'll</p> <p>6 look at the results here in the front of the report.</p> <p>7 Oh, I should have looked initially. On the</p> <p>8 lower side it was 4,370.</p> <p>9 Q Okay. On the lower side, are we talking</p> <p>10 about TEM?</p> <p>11 A TEM.</p> <p>12 Q Could you say that number one more time?</p> <p>13 A 4,370 fibers per gram.</p> <p>14 Q Okay.</p> <p>15 A Up to 268,000 fibers and bundles per gram.</p> <p>16 Q 200 --</p> <p>17 A 268,000.</p> <p>18 Q Is it different when you did it by PLM?</p> <p>19 A Well, PLM is in weight percent. So the PLM is</p> <p>20 looking at a different population of asbestos bundles</p> <p>21 than TEM looks at. And it's all by weight percent. So</p> <p>22 PLM was, from a less than .1 up to about .2, .3 weight</p> <p>23 percent.</p> <p>24 Q I mean, we're talking about thousands on</p> <p>25 thousands of fibers per bundle in a gram, I mean, do we</p>

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<p style="text-align: right;">102</p> <p>1 have any idea how much would be in something this kind</p> <p>2 of size?</p> <p>3 A That is -- how big is that, 14-ounce?</p> <p>4 Q This is a 22-ounce.</p> <p>5 A 22-ounce. Say you take the average of all 57</p> <p>6 containers by TEM and even average in the zeros you may</p> <p>7 have approximately 10,000 fibers and bundles per gram.</p> <p>8 And there is 28 grams to an ounce. So just on the</p> <p>9 lower end, say it's 7,000 per gram times 28 gives you</p> <p>10 ounces. Did you say 22?</p> <p>11 Q Yes. 22-ounce.</p> <p>12 A So in the bottle would be approximately four</p> <p>13 million asbestos fibers and bundles. If the 268,000 on</p> <p>14 the high side -- on the other end of the side times 28</p> <p>15 times 22, that's 165,000 fibers and bundles per gram.</p> <p>16 Q Okay.</p> <p>17 A I mean, not a gram, but in a bottle of a 22-ounce.</p> <p>18 Q Okay. I'm sorry. Did you say four million</p> <p>19 in fibers and bundles per gram? I'm confused as to</p> <p>20 what you just --</p> <p>21 A It's 165 million fibers and bundles in a 22-ounce</p> <p>22 bottle.</p> <p>23 Q Okay. That's what I was trying to</p> <p>24 understand.</p> <p>25 So even though we're talking about maybe a</p>	<p style="text-align: right;">104</p> <p>1 MR. DUBIN: Okay. Then I have no objection</p> <p>2 to these for demonstrative purposes.</p> <p>3 THE COURT: Proceed.</p> <p>4 MS. COOPER: If I can get those back?</p> <p>5 MR. DUBIN: Okay. Can I have them back when</p> <p>6 you're done, please?</p> <p>7 BY MS. COOPER:</p> <p>8 Q First, looking at 161.10 A. Can you first</p> <p>9 tell me what this is?</p> <p>10 A That's a nine-ounce bottle of Johnson's Baby</p> <p>11 Powder.</p> <p>12 Q Is this one of the historical samples that</p> <p>13 you got from Johnson & Johnson?</p> <p>14 A Yes, but not the container. The container never</p> <p>15 came to our laboratory. These samples were split in a</p> <p>16 laboratory up here in New Jersey that Johnson & Johnson</p> <p>17 uses to split the samples and then we got a sample out</p> <p>18 of that container.</p> <p>19 Q Can you tell me, looking at 161.10 B, what is</p> <p>20 this?</p> <p>21 A That's a TEM analysis of anthophyllite. It's</p> <p>22 really the anthophyllite solid solution series. That's</p> <p>23 an anthophyllite fiber starting in kind of the, I'd say</p> <p>24 at the, maybe the 10:30 position down to the 5 o'clock</p> <p>25 position. That is a fiber that is 14.4 micrometers</p>
<p style="text-align: right;">103</p> <p>1 low concentration of a whole bottle, we're talking</p> <p>2 about millions and billions of fibers coming -- being</p> <p>3 in just one bottle?</p> <p>4 A For these results, for 22 ounces, it would be in</p> <p>5 the millions, hundreds of millions.</p> <p>6 Q And are you able to detect, we talk about</p> <p>7 millions and millions of fibers, are you able to see</p> <p>8 that with a naked eye?</p> <p>9 A No. You can't see any of these with the naked</p> <p>10 eye. Not by the PLM, which is the very largest</p> <p>11 bundles, 100, 200 micrometers in length. If you could</p> <p>12 see it, you still wouldn't know what it is because it's</p> <p>13 in the product.</p> <p>14 Q Did you actually, were you able to take</p> <p>15 pictures of the fibers and bundles you were finding?</p> <p>16 A Yes.</p> <p>17 MS. COOPER: Your Honor, this is -- your</p> <p>18 Honor, I'll go ahead and mark these for demonstrative</p> <p>19 purposes. These are from his -- this would be from</p> <p>20 161.110. And I'll go ahead and mark them as 161.10 A,</p> <p>21 B, C, and D. And I'm going to tender these to defense</p> <p>22 counsel for examination.</p> <p>23 MR. DUBIN: Is there a report?</p> <p>24 MS. COOPER: Yes. They're images out of</p> <p>25 161.10.</p>	<p style="text-align: right;">105</p> <p>1 long, .4 micrometers wide, I believe. I'd have to -- I</p> <p>2 believe it's a single fiber. I'd have to really look</p> <p>3 at the photograph in the report or -- it has an aspect</p> <p>4 ratio of approximately 33-to-1. And it is using the</p> <p>5 counting rules that we use, which are greater than .5</p> <p>6 micrometers in length, and this is for regulated</p> <p>7 asbestos of all the TEM protocol.</p> <p>8 So, is it greater than .5 micrometers in</p> <p>9 length? Yes. It's 13.4. Greater than or equal. Does</p> <p>10 it have substantially parallel sides going down the</p> <p>11 length of the fiber? Yes. Does it have an aspect</p> <p>12 ratio greater than or equal to 5-to-1, meaning the</p> <p>13 length divided by the width? Yes. It is 33-to-1.</p> <p>14 By our counting -- not our counting rules, by</p> <p>15 the counting rules by the Environmental Protection</p> <p>16 Agency, the American Society of Testing Materials, the</p> <p>17 International Standards Organization for TEM analysis</p> <p>18 says that is reported as a regulated asbestos fiber.</p> <p>19 Q In other words, I'm going to go back to</p> <p>20 testing 101. What do you mean when you say regulated</p> <p>21 asbestos fiber?</p> <p>22 A It means that when we do this analysis, say an air</p> <p>23 sample comes in and has been collected in a building</p> <p>24 where they have removed asbestos, but now they want us</p> <p>25 to measure to see that the air is clean so people can</p>

<p style="text-align: right;">106</p> <p>1 go back in there. We follow the protocols that say if 2 you analyze this, you have to -- you have to call it 3 regulated asbestos if it meets this criteria. That's 4 the protocol or method we're using. That's what we get 5 audited on. You can't say I'm using this method, but 6 I'm using some other counting rules and I got to 7 determine if it's asbestiform or non-asbestiform. It's 8 the counting rules. It's what you have to report. 9 That, what we had up there, would be reported 10 as regulated asbestos, and we would put it on our count 11 sheet and we would put how many fibers of cc of air 12 that represents. 13 Q Now, I have a few other pictures. 161.10 C; 14 can you tell me, is that a different anthophyllite 15 fiber? 16 A It is. I think that's a single fiber. And it's, 17 again, it's anthophyllite, using the governmental ASTM 18 ISO counting rules, 7.5 micrometers, so it's greater 19 than or equal in length to .5 micrometers, or microns; 20 and it's the width of .2, so does it have an aspect 21 ratio greater than 5-to-1, greater than or equal to 22 5-to-1? I can tell you it does by looking at it. And 23 7.5 divided by .2, it has an aspect ratio of 37.5-to-1. 24 But you also will have ones that are much 25 lower. But each and every one of them will be meeting</p>	<p style="text-align: right;">108</p> <p>1 looking at the crystalline, the crystalline diffraction 2 patterns to make sure it has the right crystalline 3 structure for regulated asbestos. 4 Q Now, we talked a little bit about -- 5 MR. DUBIN: I'm sorry, can I have those 6 pictures now? 7 MS. COOPER: Sure. 8 MR. DUBIN: Do you have the identification of 9 which pages of the report these are on? 10 MS. COOPER: We can get that. 11 BY MS. COOPER: 12 Q So we talked a little bit about your results. 13 I want to talk to you a little bit about, and going 14 back to our testing 101, the idea of a non-detect. 15 Some of these are positive, but some of them aren't. 16 Can you tell us what does it mean that it's 17 non-detect? 18 A Simply that. When you did the analysis you did 19 not detect any asbestos, not one fiber. So you 20 reported as non-detected. You can't report it as zero 21 and you can't report it as there's probably some there, 22 I just didn't find it. Alls you can say is it's not 23 detectable. 24 Q Even on the ones you didn't find the positive 25 doesn't necessarily mean there's no asbestos?</p>
<p style="text-align: right;">107</p> <p>1 the regulated asbestos definition for what we have to 2 count when we use these protocols. We really don't 3 have a lot of leeway in it if you say you're going to 4 use these methods. 5 Q Last picture, Dr. Longo, because I want to 6 show different kind of shapes and sizes here. We're 7 looking at 161.10 D. Can you tell us a little bit 8 about this anthophyllite fiber? 9 A That would be more -- 10 Q I'm sorry, I said fiber but I actually don't 11 know. 12 A Again, we're looking at pictures off it. The 13 analyst, the microscopist makes the decision. Some of 14 these bundles are obvious. They look like they have 15 wires sticking out the end of it. But to be a bundle 16 it has to have multiple fibers, typically, depending on 17 the protocol, at least two or three, that are touching 18 and all going in the same direction. But the 19 microscopist makes the final decision. It's just that 20 these photographs are not as good. 21 So again, in this particular case it has an 22 aspect ratio of about 10-to-1 and meets the definition 23 of counting rules, plus besides this we're doing an 24 analysis where we check the micro chemistry to see if 25 it matches a particular type of asbestos. We're</p>	<p style="text-align: right;">109</p> <p>1 A Alls you can say, scientifically it's non-detect. 2 You can't say there's nothing there, that it's clean. 3 You can only go to your analytical sensitivity. So if 4 there was 2,000 fibers per gram of bundle and our 5 analytical sensitivity is 4,000 grams, we're not going 6 to detect it. 7 But on the same token, to be fair, you can't 8 say it's 2,000, all you can say it's below our 9 detection limit. You can't say it's not there and you 10 can't say it's there. 11 Q Dr. Longo, I want to move us a little bit 12 down the road because I am trying to get you out of 13 here as soon as we can. We're going to move from your 14 test results now to something I call the name game. 15 So we talked a little about the definition of 16 a regulated fiber. Can you first tell us what is -- 17 we've heard the word asbestiform. When we say 18 something is asbestiform, what does that mean? 19 A It's a definition that states that the mineral has 20 formed like asbestos. It's fibrous. And that's truly 21 just the definition. It just forms like asbestos. 22 Q Well, what does it have to be or what do you 23 mean when you say that something is asbestos? 24 A We say it's asbestos because we are following the 25 method that gives you the definitions of what you</p>

<p style="text-align: right;">110</p> <p>1 report as asbestos. The fiber length, the fiber width, 2 the chemistry as you get into it; obviously, after it's 3 a fiber you have to say yes, it's asbestos or no, it's 4 not, it's something else; fibrous talc, antigorite or 5 some other mineral. 6 Q So you talk about standards for you to be 7 able to count. What standards are you using? 8 A For TEM, for PLM we're using the International 9 Standards Organization 22262-1 for PLM, no heavy liquid 10 method. For the heavy liquid density method we're 11 using the Blount method that she published in 1991. 12 So, and we're using the counting rules of what you call 13 asbestos in the ISO 22262-1. They have specific things 14 that they say in order to call it asbestiform, these 15 are the things that you have to have. 16 By transmission electron microscopy there is 17 a number of methods. There's the Environmental 18 Protection Agency, AHERA, A-H-E-R-A, Asbestos Hazard 19 Emergency Response Act that has a TEM method in the 20 back that you have to use if a school is being cleared, 21 so kids can go back in after they have removed 22 asbestos. That has the counting rules we just talked 23 about; greater than or equal to .5, parallel sides, 24 5-to-1 aspect ratio and asbestos. 25 It's also the same method that the</p>	<p style="text-align: right;">112</p> <p>1 BY MS. COOPER: 2 Q So, Dr. Longo, I'm going to hand you 3 Plaintiff's Exhibit 936. Can you tell me what that is? 4 A This is the Environmental Protection Agency Part 5 763 Asbestos, which is part of the AHERA, emergency 6 response -- the Asbestos Emergency Response Act. And 7 it has to do with what you have to do to analyze for 8 asbestos, both polarized light microscopy if you do 9 that or transmission electron microscopy for air 10 samples. 11 Q So I want to turn your attention to page 876. 12 And I'm actually going to put it up here on the screen 13 as well. 14 So, you mentioned that there is a definition 15 for asbestiform in here and we see here that it says, 16 "A specific type of mineral fibrosity in which the 17 fibers and fibrils possess high tensile strength and 18 flexibility." 19 So, Dr. Longo, how do you count something 20 like that? 21 A Well, you can't. It's just a general definition. 22 You know, how do you determine high tensile strength? 23 It's impossible with a polarized microscope or a 24 transmission electron microscope. And what's the 25 definition of high tensile strength?</p>
<p style="text-align: right;">111</p> <p>1 International Standards Organization uses for their TEM 2 method. They have two of them. The fiber is designed 3 exactly what I just said about EPA; same length, same 4 aspect ratio, same everything. 5 American Society of Testing Materials has 6 three TEM methods on the books right now -- no, four. 7 They all use that method. They all say if it's this, 8 you count it as asbestos and report it. It's not our 9 counting rules. It's ASTM, International Standards 10 Organization, the EPA; it's the same counting rules. 11 It's fairly straightforward. 12 Q Okay. I have a few of these, but I'm just 13 going to show us one of them. 14 So you mentioned EPA, ASTM, all these 15 standards that you reference to figure out if something 16 is this regulated asbestos fiber. 17 So, your Honor, at this time we're going to 18 be offering for demonstrative purposes Plaintiff's 19 Exhibit 936. Tender to defense counsel for 20 examination. 21 MR. DUBIN: This is AHERA? No objection to 22 the use for demonstrative purposes. 23 THE COURT: Okay. Proceed. 24 MS. COOPER: Your Honor, may I approach? 25 THE COURT: Yes.</p>	<p style="text-align: right;">113</p> <p>1 So these are general definitions. What 2 they're asking you to do are flexibility. How do you 3 determine flexibility on a fiber or bundle that is 4 microns in size that you can't even see with a naked 5 eye? There is no test for that. 6 And these tests are very specific. You're 7 analyzing regulated asbestos. There's nothing in this 8 earth, there's no analytical scientific equipment that 9 can take single microscopic fibers and measure high 10 tensile strength that's not defined or flexibility 11 that's not defined. And every one of the methods will 12 have this. 13 But then if you go down to what a fiber is, 14 they don't define that as high tensile strength or has 15 to have flexibility. They just say here it is, 16 structure greater than or equal to five micrometers in 17 length with an aspect ratio length to width of 5-to-1 18 or greater and having substantially parallel sides. 19 Every TEM method has this. 20 Q Okay. So when you're counting it, you're 21 using fiber, whether or not it meets this definition. 22 That's why we call it a regulated fiber. And is that 23 exactly what you did when you were calculating your 24 results? 25 A Yes.</p>

<p style="text-align: right;">114</p> <p>1 Q Can you tell us, if you have a single fiber 2 can you tell if it's asbestiform? 3 A Well, it meets the definition of asbestiform, but 4 if you have a cleavage fragment that has the 5 possibility of shattering or you'll have parallel sides 6 in the TEM, it will look, 'cause TEM is two dimensions 7 It will look like a fiber. And if you're doing it in a 8 vacuum, you have absolutely no information about where 9 the sample came from, the type of material it is you're 10 analyzing, other test reports that have been done in 11 the past, and you walk in and you know nothing about 12 it, you don't know anything about the single fiber 13 other than what you're looking at in the TEM, and it is 14 asbestos, I mean, it does meet the definitions per 15 chemistry and everything, the only thing you can say is 16 that it is a regulated asbestos fiber. I can't tell 17 you if it's asbestiform or not without more information 18 about the entirety of where this came from. That is a 19 true statement. 20 Q Do you have more information than a single 21 fiber, though? 22 A Yes. 23 Q You've tested, you said, 109 samples? 24 A In total, it's -- for containers it's close for -- 25 out of these two mines -- three mines, actually, we</p>	<p style="text-align: right;">116</p> <p>1 THE COURT: What's the nature of the 2 objection? 3 MR. DUBIN: She's talking about how these 4 minerals occurred in nature. I think this is leading 5 into where she was in the opening about the idea this 6 is a mistake, you'll find these metals together. 7 That's all the province of a geologist or mineralogist 8 which he is not. He's able to come and talk about what 9 he's tested and in terms of his model testing, but he 10 is not going to be talking about whether they occur 11 together in nature. That's not his field of expertise. 12 MS. COOPER: And, your Honor, he's reviewed 13 several mineral -- mine articles and he has studied 14 these fibers. He's talked about asbestiform and 15 non-asbestiform. He has years of looking at this very 16 issue. I think that he can say, based on his 17 experience and things he reviewed, whether he knows 18 that asbestiform and non-asbestiform occur in nature. 19 THE COURT: I'll allow it if you lay a 20 foundation. Certainly he does not need to be a 21 geologist. But if by reading articles that are, you 22 know, or anything of that nature that establishes his 23 understanding, I'll allow him to testify. But you need 24 to lay the foundation, which you have not. 25 MR. DUBIN: Just one thing, your Honor. I</p>
<p style="text-align: right;">115</p> <p>1 have tested hundreds of individual fibers and bundles. 2 So we have a population of what we're seeing. 3 Now, population is not defined in any of 4 these methods. They say you have to have a population. 5 If you want to go with the basic statistics, population 6 is two or more. But we have hundreds and hundreds 7 where they meet all these definitions. Not the high 8 tensile strength and stuff because that doesn't exist. 9 Where they're bundles in there and we have information 10 from other testing that says it's asbestos. 11 So no, my opinion is it's all asbestiform. 12 But in a vacuum, a single fiber in it -- a two 13 dimensional and it has parallel sides, you don't know 14 anything else about the sample, yes, you could not say 15 it's asbestiform or not. 16 Q Last point about this whole name game and 17 then I finally want to get to Mr. Rimondi's exposure. 18 Okay? 19 So first of all, on this asbestiform versus 20 non-asbestiform name game debate, is it true that 21 asbestiform and non-asbestiform actually occur in 22 nature? 23 MR. DUBIN: Objection. 24 THE COURT: Sidebar. 25 (Sidebar.)</p>	<p style="text-align: right;">117</p> <p>1 mean, I've read the articles. That doesn't make me 2 competent to be a witness on geology in a courtroom. 3 And so if the foundation is just that he's read the 4 articles, I'm going to object. 5 THE COURT: Well, you're an attorney and he's 6 not an attorney. I will allow you to lay a foundation. 7 You're not on the witness stand. Okay? 8 While we're here, I take it you're trying to 9 find the original photographs from -- 10 MR. DUBIN: Thousands of pages. I'm trying 11 to do my best. 12 THE COURT: I understand. Are you going to 13 be using any more pictures? 14 MS. COOPER: No. These are the ones -- I can 15 actually make a copy and also get him the page numbers. 16 THE COURT: I want counsel to have that 17 before cross-examination. 18 MS. COOPER: Absolutely. 19 THE COURT: After this one section we'll take 20 a break, lunch break, before you get to the last 21 section of your roadmap. 22 MS. COOPER: Absolutely, your Honor. 23 THE COURT: Don't forget to lay your 24 foundation. 25 MS. COOPER: Yes, your Honor.</p>

<p style="text-align: right;">118</p> <p>1 THE COURT: Thank you. 2 (Sidebar ends.) 3 BY MS. COOPER: 4 Q So, Dr. Longo, you were talking about 5 asbestiform versus non-asbestiform. Have you reviewed 6 articles about that very topic? 7 A I have. 8 Q Can you tell me a little bit about that? 9 A There's a number of articles out there. Ann Wylie 10 has written articles about asbestiform and 11 non-asbestiform. Campbell has asbestiform and 12 non-asbestiform. And it has to do more of the 13 structure and the fragments and you can't take 14 non-asbestiform and break it and make asbestos and that 15 type of thing. So there's a number of different 16 articles out there. 17 Q Have you also reviewed internal J&J documents 18 about the asbestiform and non-asbestiform debate? 19 A No. Not too much in the early years. They may 20 have some later ones, but I don't recall going through 21 that. 22 Q As part of your expertise is it required that 23 you look into articles about whether something is 24 asbestiform or non-asbestiform and also just how those 25 minerals that you are reviewing occur in nature?</p>	<p style="text-align: right;">120</p> <p>1 Q When we're talking about what's a regulated 2 fiber, what you will count and what AHERA, so the EPA, 3 what the EPA is going to count, are we using public 4 health definitions, are we using geological 5 definitions? 6 A They're primarily health-based definitions for 7 what those counting regulations have been for years and 8 years. Go back to the '90s and '80s. That's what you 9 use. We're certified to do that. If you're going to 10 use another definition, you can't say you used that 11 protocol unless you say well, we used this protocol but 12 we changed it to have different definitions of what 13 you're doing. And as long as you acknowledge that, you 14 can do that. 15 But you can't say this air sample has been 16 done according to the National Voluntary Laboratory 17 Accreditation Program with their stamp on it and you 18 change something in the counting rules or protocols so 19 that you're not doing what they say you should be 20 doing, and you don't want the auditor to find those 21 kind of reports. You have to do, especially if you 22 have their logo from that certification on your report. 23 MS. COOPER: Your Honor, I think that's a 24 good stopping point. 25 THE COURT: Thanks.</p>
<p style="text-align: right;">119</p> <p>1 A Yes. 2 Q So can you tell us, do non-asbestiform and 3 asbestiform amphiboles occur in nature together? 4 A Yes. 5 Q And is that in the mines they're occurring 6 together? 7 A Yes. 8 Q And these geological terms of asbestiform and 9 non-asbestiform -- 10 MR. DUBIN: Again, objection. 11 THE COURT: Objection is overruled. Can you 12 finish your question? 13 BY MS. COOPER: 14 Q As far as geological terms of asbestiform or 15 non-asbestiform, are they using public health 16 definitions or are they using geological definitions? 17 A It's geological definitions. It really has to do 18 with especially the high tensile strength and 19 flexibility and how valuable the asbestos is in a 20 particular mine where they're mining asbestos. They're 21 more fibrous, the more flexible, the higher amount you 22 can charge, if you're digging it out of the ground, 23 what a ton costs. That's where that all comes from. 24 Because these definitions have really been used a lot 25 in commercially added asbestos products.</p>	<p style="text-align: right;">121</p> <p>1 Members of the jury, we'll take the lunch 2 break now. Leave your notebooks here. Remember to 3 wear your juror badges where they are visible. 4 Recall all the instructions I've been 5 providing to you during the course of this trial: 6 Please, no research of any kind whatsoever. Do not 7 discuss this case even amongst yourselves, including 8 the testimony that you just heard. Thank you. 9 Enjoy your lunch. Be ready to come back 10 upstairs at 1:35. 11 (Jury exits.) 12 THE COURT: And we're off the record. 13 Dr. Longo, you may step down. 14 THE WITNESS: Thank you, your Honor. 15 (Luncheon recess: 12:27 p.m. to 1:41 p.m.) 16 17 18 19 20 21 22 23 24 25</p>

<p style="text-align: right;">122</p> <p>1 AFTERNOON SESSION</p> <p>2 COURT OFFICER: Jury's entering.</p> <p>3 THE COURT: Jury entering.</p> <p>4 (Jury enters.)</p> <p>5 THE COURT: Please be seated. Make sure cell</p> <p>6 phones are turned off.</p> <p>7 Miss Cooper, whenever you're ready.</p> <p>8 MS. COOPER: Ercilyn, if I can get the Elmo?</p> <p>9 Thank you so much.</p> <p>10 BY MS. COOPER:</p> <p>11 Q Welcome back, members of the jury and</p> <p>12 Dr. Longo.</p> <p>13 A Thank you.</p> <p>14 Q Just clarifying a few things before we keep</p> <p>15 moving down our road. Okay? So first of all, we</p> <p>16 talked about the concentration method. Got my tongue</p> <p>17 tied today. We talked about the concentration method</p> <p>18 and we talked about the TEM method that J&J was using.</p> <p>19 With the way that the concentration method</p> <p>20 works, can you actually test a whole lot more talc by</p> <p>21 using the concentration method?</p> <p>22 A Yes. You can. That's correct.</p> <p>23 Q Is that true because the TEM method J&J was</p> <p>24 using, was that pinching off little bits to be</p> <p>25 measured?</p>	<p style="text-align: right;">124</p> <p>1 BY MS. COOPER:</p> <p>2 Q Do you know if, by volume, or do you know by</p> <p>3 volume how much talc you've tested, Dr. Longo?</p> <p>4 A Yes. Not by volume, by weight.</p> <p>5 Q I'm sorry. By weight. Do you know that if</p> <p>6 you were using this TEM method that Johnson & Johnson</p> <p>7 was using, if they're able to test as much as you have</p> <p>8 tested?</p> <p>9 A Not in the number of samples that we've tested.</p> <p>10 No. They would have to have a lot more TEMs than what</p> <p>11 we did for the same amount.</p> <p>12 Q And Johnson & Johnson, you said that they</p> <p>13 have known about this method since the '70s, and we saw</p> <p>14 a couple of documents. We saw that needle in the</p> <p>15 haystack, Colorado School of Mines told them. And for</p> <p>16 the record, that was 1973. And then you talked about</p> <p>17 how Pooley had told them and they said it was too</p> <p>18 sensitive.</p> <p>19 A I'm not --</p> <p>20 Q Sorry.</p> <p>21 A I'm not sure Dr. Pooley said it was too sensitive.</p> <p>22 Q Okay.</p> <p>23 A I think that was Johnson & Johnson.</p> <p>24 Q Okay. Sorry. That's a good clarification.</p> <p>25 And that was in 1973?</p>
<p style="text-align: right;">123</p> <p>1 A Yes. They actually start with the same amount,</p> <p>2 but because you have a problem of overloading the</p> <p>3 sample with too much talc, they have to dilute it a</p> <p>4 fair amount and that's the difference. We start with</p> <p>5 about the same amount in the concentration method, but</p> <p>6 we don't have to dilute it after removing the talc so</p> <p>7 we're essentially testing the entire amount.</p> <p>8 Q So instead of just testing a tiny sample and</p> <p>9 diluting that, you're being able to test the entire</p> <p>10 bulk of the talc?</p> <p>11 A Not the entire bulk, but both methods start with</p> <p>12 about 30 to 40, sometimes 50 milligrams. On the one</p> <p>13 side if you don't use the concentration method you have</p> <p>14 to spread that out. You dilute it. You just add more</p> <p>15 water to it or more solution. On the other hand with</p> <p>16 the concentration method, you can use the whole 30, 40,</p> <p>17 50 milligrams and that allows you to separate out the</p> <p>18 majority of that, and then allows you to just harvest</p> <p>19 the amphibole minerals that are present.</p> <p>20 Q So in the two years that you've been testing</p> <p>21 with concentration method, have you tested much more</p> <p>22 than J&J?</p> <p>23 MR. DUBIN: Objection. Lacks foundation.</p> <p>24 THE COURT: Sustained. Don't answer that</p> <p>25 question.</p>	<p style="text-align: right;">125</p> <p>1 A Correct.</p> <p>2 Q Okay. So let's get back to down the road.</p> <p>3 MR. DUBIN: I'm going to object. That was</p> <p>4 just testimony from counsel. Move to strike.</p> <p>5 THE COURT: That portion indicated by Miss</p> <p>6 Cooper relative to sensitivity and who said it is</p> <p>7 stricken from the record. You are not to consider it.</p> <p>8 BY MS. COOPER:</p> <p>9 Q Getting back down the road, I want to talk to</p> <p>10 you about Mr. Rimondi's exposure.</p> <p>11 First of all, what have you reviewed in</p> <p>12 regards to Mr. Rimondi specifically?</p> <p>13 A I reviewed Mr. Rimondi's two volumes of</p> <p>14 deposition. One was on August 15, 2017, and the next</p> <p>15 one was on August 23rd of 2017. I reviewed the</p> <p>16 deposition of Mr. Ricardo Rimondi Junior, his son;</p> <p>17 deposition that was on October 20 of 2017, and I</p> <p>18 reviewed Pilar Rimondi's deposition who was at some</p> <p>19 point his wife. And then I reviewed the aunt's</p> <p>20 deposition, Emma Pantle, Pantlely, I think it is, her</p> <p>21 October 12, '17 deposition where she discussed about</p> <p>22 she took care of Ricardo from when he was six months to</p> <p>23 six years old and talked about how diaper changes and</p> <p>24 baths through that time frame, two-and-a-half years</p> <p>25 approximately or two years for diaper change and then</p>

<p style="text-align: right;">126</p> <p>1 baths all the way through, and her use of Johnson's</p> <p>2 Baby Powder during both bathing and changing diapers.</p> <p>3 Q So there's no confusion, did you test talc or</p> <p>4 Johnson & Johnson Baby Powder from Mr. Rimondi</p> <p>5 specifically?</p> <p>6 A No. We did not.</p> <p>7 Q But we've heard from Dr. Hopkins about the</p> <p>8 different mines that were used, Italian, Vermont, and</p> <p>9 Hammondsville, Argonaut. Have you tested these mines?</p> <p>10 A We have tested products that were manufactured</p> <p>11 where those mines were used; the Val Chisone mine in</p> <p>12 Italy; the Vermont mines, which are a number of them,</p> <p>13 Hammondsville, Rainbow, Argonaut, Hamm, and they're all</p> <p>14 from the Vermont area. So we have tested and we've</p> <p>15 tested samples from China.</p> <p>16 Q And when we talked about the positive in the</p> <p>17 samples that you found, can you tell me what years that</p> <p>18 you sampled?</p> <p>19 A Well, the samples that we received from, from the</p> <p>20 historical museum from Johnson & Johnson is samples</p> <p>21 that go from approximately -- well, go from 1960</p> <p>22 through the '60s, 1970s through the '70s, 1980s through</p> <p>23 the '80s, and two samples from 1994.</p> <p>24 Q So based on that, I want to talk to you --</p> <p>25 first of all, would each of the mines, the Italian and</p>	<p style="text-align: right;">128</p> <p>1 A Just diaper changes.</p> <p>2 Q And have you done an air sampling on diaper</p> <p>3 changes before?</p> <p>4 MR. DUBIN: Your Honor, objection.</p> <p>5 THE COURT: Sidebar.</p> <p>6 (Sidebar.)</p> <p>7 THE COURT: What's the basis of the</p> <p>8 objection?</p> <p>9 MR. DUBIN: They said they weren't using the</p> <p>10 diapering study, moved against it in limine and they</p> <p>11 said they weren't using the diapering study. Now</p> <p>12 they're asking about the diaper study. Why do we have</p> <p>13 to do this kind of stuff?</p> <p>14 MS. COOPER: And, your Honor, I'm not -- I'm</p> <p>15 asking has he ever done it. I'm going to ask him is it</p> <p>16 a dusty process. That's simply as far as I was</p> <p>17 intending on going.</p> <p>18 MR. DUBIN: You're trying to bolster his</p> <p>19 credibility and knowledge with a study that you said</p> <p>20 you're not using in this case.</p> <p>21 THE COURT: You indicated you were not going</p> <p>22 to use that.</p> <p>23 MS. COOPER: We're not using diaper data</p> <p>24 because they don't have diapering data. The fact that</p> <p>25 he's done diapering studies, I mean --</p>
<p style="text-align: right;">127</p> <p>1 the Vermont, we talked about how you found positive</p> <p>2 samples, so I want to talk about the exposure that you</p> <p>3 know of for Mr. Rimondi through these years that you've</p> <p>4 testified.</p> <p>5 So, first of all, can you tell me what</p> <p>6 exposure activities that you considered?</p> <p>7 A I considered the exposures from six months to six</p> <p>8 years when the aunt was changing Mr. Rimondi's diapers</p> <p>9 and also giving him a bath every day.</p> <p>10 Q So it's your understanding that he was born</p> <p>11 in 1960?</p> <p>12 A In September of 1960. That's correct.</p> <p>13 Q So that would be 1960 to 1966. And what was</p> <p>14 his exposure levels at that time?</p> <p>15 A Well, we did numbers of applications.</p> <p>16 Q Okay.</p> <p>17 A And each time the diaper was changed there is the</p> <p>18 application of talcum powder, Johnson's Baby Powder,</p> <p>19 each time he was given a bath, and she testified that</p> <p>20 she would, anywhere from, depending on the years,</p> <p>21 around four or five diaper changes a day. So I used</p> <p>22 3.5 diaper changes a day times 365 days times, two</p> <p>23 years, and that gives you 2,555 separate applications</p> <p>24 of Johnson's Baby Powder.</p> <p>25 Q So this is just diaper changes?</p>	<p style="text-align: right;">129</p> <p>1 THE COURT: Then how can he cross-examine on</p> <p>2 that? I mean, you've now told this jury that -- you</p> <p>3 asked him whether he did a diapering study. He said he</p> <p>4 did. You indicated you're not using it. So what is</p> <p>5 counsel to do with that?</p> <p>6 MS. COOPER: Okay, your Honor. I will</p> <p>7 withdraw the question.</p> <p>8 THE COURT: Thank you.</p> <p>9 (Sidebar ends.)</p> <p>10 THE COURT: Objection sustained.</p> <p>11 BY MS. COOPER:</p> <p>12 Q So you calculated the number of diaper</p> <p>13 changes. What else did you calculate between 1960 and</p> <p>14 1966?</p> <p>15 A Also one bath a day from the age of six months to</p> <p>16 the ages of six years.</p> <p>17 Q So one bath a day --</p> <p>18 A Times 365 days a year. And I used a conservative</p> <p>19 five years.</p> <p>20 Q And what does that equal?</p> <p>21 A That gives you 1,825 applications.</p> <p>22 Q Using my cheat sheet, make sure I get this</p> <p>23 right. So that's baths.</p> <p>24 All right. What happened after 1966?</p> <p>25 A Starting in 1967 to approximately 1975, he started</p>

<p style="text-align: right;">130</p> <p>1 self applying the Johnson Baby Powder after baths or 2 showers. 3 Q All right. So this would be, how many baths 4 was it between 1967 and 1975? 5 A He was only taking one bath a day. So it's one 6 day sometimes 365 days, and during that period it was 7 eight years. 8 Q And what does that equal? 9 A 2,920 applications. 10 Q And did that pattern change, I guess, in 11 1975? 12 A Mr. Rimondi testified in about 1976 he started 13 taking two baths a day. Sometimes three. 14 Q And -- 15 A Depending on what he was doing. 16 Q And do you know when he stopped using, I 17 guess, Johnson & Johnson Baby Powder? 18 A In 2010. 19 Q And at that time he was using -- doing two 20 baths a day? 21 A Well, he said sometimes three. I used two baths, 22 two showers; one in the morning and one at night before 23 he went to bed. 24 Q And do you remember why he would bathe? 25 A Sometimes the heat. Sometimes he worked out.</p>	<p style="text-align: right;">132</p> <p>1 Q And what did their data use as the amount of 2 grams? 3 A For female, the amount was, heavy user, meaning 4 almost full body, was 15 grams per application. And 5 for a test subject that was a male for heavy 6 application, the amount was 23.3 grams -- 7 Q Okay. 8 A -- per instance. 9 Q Did you use that? Did you use that as a 10 point of calculation? 11 A I used the 15 grams and then used that throughout 12 his history. 13 Q Why did you do that? 14 A I wanted to be conservative, instead of breaking 15 it down during the diapering and the first years is to 16 use that across the board, and not use the 23.3 to try 17 to be conservative. 18 Q So you said you used 15 grams? 19 A Correct. 20 Q So if we estimate about 15 grams per 21 application, how much is that? How many grams? 22 A If you multiply that, 32,120, and you multiply 23 that by 15 grams, that would give you 481,800 grams of 24 talcum powder that was dispensed over that time period. 25 Q Do you know how many bottles that would be?</p>
<p style="text-align: right;">131</p> <p>1 Sometimes he just said it made him feel good to do that 2 before he went to bed. So he did it for 34 years. 3 Q And that brings that to 24,820. So -- 4 A I actually have 25,550. 5 Q I actually have a calculator. 6 A Did that work better? 7 MS. COOPER: Your Honor, may I approach? 8 THE COURT: Sure. 9 A I can do that. 10 Q You have one. Perfect. 11 A You're correct. 24,820. 12 Q So keep your calculator out because I'm 13 actually going to ask you to add these applications up, 14 get us our total application number. 15 A Okay. Total applications of Johnson Baby Powder 16 would be 32,120 times during the period it was either 17 used on him by his aunt or self application for 49 18 years. 19 Q Do you know how much, based on reviewing 20 Johnson & Johnson's internal records, do you know how 21 much an average application would be? 22 A Average would range between four and eight grams 23 per application. But then there's studies they did for 24 heavy users, which Mr. Rimondi would be in that 25 category.</p>	<p style="text-align: right;">133</p> <p>1 A Well, you convert it to ounces, so if you take 2 4,000 -- 481,800 grams, and there's approximately 28 3 grams in an ounce, so you divide that by 28. That will 4 give you 17,207 ounces. 5 Q Say that number one more time. 6 A 17,207 ounces. 7 Q How do we calculate that into bottles? 8 A Well, the son testified that the size of the 9 Johnson's Baby Powder that he would routinely see is 10 about the size of a Gatorade bottle. If you look at 11 the bottles of Johnson & Johnson, that comes pretty 12 close to a 14-ounce bottle. 13 Q Smaller than this one. This is 22. 14 A Correct. 15 Q So if we use the smaller bottle, the 14-ounce 16 bottle, how many bottles would that be? 17 A 1,229 bottles. 18 Q Now, with this amount of exposure and based 19 on your studies of the amount of asbestos in the 20 product, would you say that's a substantial exposure? 21 A Yes. 22 Q And you talked a little bit about the 23 different kinds of testing, one of which was air 24 sampling, right? Have you done air sampling studies? 25 A We have.</p>

<p style="text-align: right;">134</p> <p>1 Q And have you found that, first that talcum 2 powder is a dusty -- a dusty product? 3 A It is. 4 Q And is asbestos in the product in such a way 5 that you can breathe it? 6 A Yes, it is. It's all fine powder so it's nothing 7 binding in with the talc, not like a product that has 8 asbestos added to it where it's a mixture of other 9 materials. This is a very small particulate that 10 easily gets airborne. 11 Q So we might have seen pictures of, say, pills 12 and olive oil and deodorant that has talc in it. If 13 it's not in breathable form, is the asbestos or the 14 talc that has asbestos in it, could that be dangerous? 15 A I don't talk about danger or health effects of 16 asbestos. On the other hand, I talk about what is the 17 potential to inhale asbestos fibers or measurements of 18 asbestos fibers in product where you're wearing air 19 samples and you can make a measurement. 20 The material is dusty. You're shaking it 21 out, it gets up into the environment, and you're going 22 to be inhaling or breathing the talc. You can see it. 23 Talk about it being dusty, Mr. Rimondi talked about it 24 being dusty, getting up in the air. And even when you 25 can't see it, you can smell it because of the fragrance</p>	<p style="text-align: right;">136</p> <p>1 you're going to find the asbestos? 2 A You have to have the highest analytical 3 sensitivity possible to get an idea of can you detect 4 asbestos or not. Using poor analytical sensitivity 5 will not allow you to do that. 6 Q And can we agree that all of the opinions 7 given today were, are within a reasonable degree of 8 scientific certainty? 9 A Yes. 10 MS. COOPER: Your Honor, at this time I pass 11 the witness. 12 THE COURT: Thank you. 13 Any time you're ready, counsel. 14 MR. DUBIN: Yep. 15 CROSS-EXAMINATION BY MR. DUBIN: 16 Q Hi, Dr. Longo. How are you? 17 A Fine. Good afternoon. 18 Q Good afternoon. 19 All right. So I want to walk through your 20 opinions and hopefully give the jury a little bit more 21 of an understanding of what's going on here. 22 First, I think you've already explained that 23 at some point you were given a number of bottles of 24 Johnson & Johnson products to analyze by a few 25 different law firms, right?</p>
<p style="text-align: right;">135</p> <p>1 that is adhered to the talc particles. 2 Q Dr. Longo, we talked about the idea of detect 3 and non-detect. Is there a way to guarantee that talc 4 is free of asbestos with the current available methods? 5 A No. You can only go to your detection limit. 6 Q So if a company wants to guarantee that their 7 baby powder does not have, it is completely free of 8 asbestos, what should they do? 9 A The only solution is not sell it with cosmetic 10 talc. 11 Q Do you know if Johnson & Johnson sells 12 cornstarch baby powder? 13 A They do. 14 Q Have you ever heard of asbestos being in 15 cornstarch baby powder? 16 A No. 17 Q Dr. Longo, we've gotten to the end of our 18 road. I wanted to ask you just finally, if you want to 19 find asbestos, first, do you think it's important to 20 use the best tests? 21 A Yes. 22 Q Do you think it's important to use the most 23 sensitive tests? 24 A Yes. 25 Q Do you think that that is the only way that</p>	<p style="text-align: right;">137</p> <p>1 A That is correct. 2 Q It was three different law firms, one of 3 which was the Lanier firm, correct? 4 A Yes, sir. 5 Q And what did they ask you to look for? 6 A They asked me to see if it had asbestos in it. 7 Q That's not quite right, right? They asked 8 you to look for amphibole. That's what they asked you 9 to look for? 10 A That's possible. I don't recall that, but that's 11 possible. 12 Q Let's look at some of your testimony. 13 (Handing.) 14 A Thank you. 15 Q I'll let you read it first before attempting 16 to impeach or anything. Give you an opportunity. Look 17 at page 53 of your testimony in the Herford case, line 18 6 through 11. 19 A I'm sorry. What was that page again? 20 Q I'm sorry. Page 53. 21 A Thank you. 22 MR. DUBIN: I'm sorry, your Honor. I have 23 one for you, too. 24 Here you go. (Handing.) 25 THE COURT: Thank you.</p>

35 (Pages 134 to 137)

<p style="text-align: right;">138</p> <p>1 BY MR. DUBIN:</p> <p>2 Q So when you were hired by those plaintiffs'</p> <p>3 law firms to look at the Johnson & Johnson product,</p> <p>4 what did they ask you to look for?</p> <p>5 A Specifically asked to determine if Johnson &</p> <p>6 Johnson cosmetic talc contains detectable amount of</p> <p>7 amphiboles.</p> <p>8 Q Right. So the question wasn't asbestos. It</p> <p>9 was look for amphiboles, right?</p> <p>10 A That's what I stated.</p> <p>11 Q And I want to start there, we'll come back to</p> <p>12 that in a second because I want to talk about a</p> <p>13 different type of asbestos and asbestos that's not</p> <p>14 amphibole and just orient us, if we could put up slide</p> <p>15 5.</p> <p>16 So I've written up here what is asbestos, and</p> <p>17 we're going to talk a lot about that today. But you</p> <p>18 recognize these various terms that I have up here under</p> <p>19 what is asbestos, right?</p> <p>20 A I do.</p> <p>21 Q The one I want to focus on first is the only</p> <p>22 one of the asbestos types that is not an amphibole and</p> <p>23 that is chrysotile. That's something you're familiar</p> <p>24 with, right?</p> <p>25 A I am.</p>	<p style="text-align: right;">140</p> <p>1 Q But now, for example, you've done some PLM</p> <p>2 work without concentration on Johnson & Johnson</p> <p>3 products, right?</p> <p>4 A That is correct.</p> <p>5 Q So no bias in that against finding</p> <p>6 chrysotile, right?</p> <p>7 A Yes, sir. There is some.</p> <p>8 Q Okay. Because there may be a thin fiber?</p> <p>9 A Yes, sir. It's harder to see chrysotile by PLM at</p> <p>10 these concentrations.</p> <p>11 Q But certainly you no longer have the issue of</p> <p>12 heavy density separation, right?</p> <p>13 A That is correct.</p> <p>14 Q And you still didn't find chrysotile, right?</p> <p>15 A No. We haven't seen it.</p> <p>16 Q And with respect to TEM work, you said there</p> <p>17 are some limitations for looking at, for chrysotile,</p> <p>18 with PLM; you could, if you wanted to, do TEM work</p> <p>19 without concentration to see if there's any chrysotile</p> <p>20 that you can find in any Johnson & Johnson products,</p> <p>21 right?</p> <p>22 A Within the limitations of the detection limit,</p> <p>23 that's correct.</p> <p>24 Q And you have simply chosen not to do that</p> <p>25 analysis?</p>
<p style="text-align: right;">139</p> <p>1 Q And so based on what we -- we've talked ad</p> <p>2 nauseam, I know you don't know, you were sitting out in</p> <p>3 the hall, we were talking ad nauseam about people who</p> <p>4 claimed to find chrysotile in Johnson & Johnson such as</p> <p>5 Dr. Lewin, some people at Bowling Green, et cetera.</p> <p>6 But that wasn't even something that when these lawyers</p> <p>7 originally approached you even asked you to look for in</p> <p>8 Johnson & Johnson products, right?</p> <p>9 A According to that testimony, that's correct.</p> <p>10 Q And, in fact, you've analyzed now, I think</p> <p>11 you said somewhere on the order of 100 bottles of</p> <p>12 Johnson & Johnson products and you have never reported</p> <p>13 finding any chrysotile in any of them, right?</p> <p>14 A That is correct.</p> <p>15 Q And I think one of your initial explanations</p> <p>16 for that is that you used, particularly when you were</p> <p>17 starting out, this heavy density liquid separation</p> <p>18 method, sometimes you referred to it as the Blount</p> <p>19 method, right?</p> <p>20 A Yes.</p> <p>21 Q And you've said that one of the bad things</p> <p>22 about the Blount method, I guess one of its drawbacks</p> <p>23 is that it sort of prohibits you from finding</p> <p>24 chrysotile, right?</p> <p>25 A Correct.</p>	<p style="text-align: right;">141</p> <p>1 A That's correct. Not yet.</p> <p>2 Q So to be clear, when we see documents,</p> <p>3 plaintiffs have presented documents that chrysotile is</p> <p>4 in Johnson & Johnson, you, the expert, as the expert</p> <p>5 coming to testify for them, have not done TEM work</p> <p>6 without concentration in order to check whether</p> <p>7 chrysotile is really in this product, right?</p> <p>8 A That is correct.</p> <p>9 Q So let's now talk about amphiboles. And if</p> <p>10 we go to slide 7, I blocked those out a little bit.</p> <p>11 So now I've separated out the amphibole types</p> <p>12 from the -- chrysotile is a serpentine mineral, right?</p> <p>13 A That is correct.</p> <p>14 Q And amphibole, the word amphibole does not</p> <p>15 mean asbestos, correct?</p> <p>16 A Does not.</p> <p>17 Q And you'll see here that for some of the</p> <p>18 amphiboles, the amphibole asbestos types are listed on</p> <p>19 the left. For some of the amphiboles there are special</p> <p>20 names when the amphibole occurs in its asbestos-form,</p> <p>21 correct?</p> <p>22 A Correct.</p> <p>23 Q So like riebeckite is the non-asbestos</p> <p>24 version of crocidolite, just as an example?</p> <p>25 A That is correct.</p>

<p style="text-align: right;">142</p> <p>1 Q However, when you get down to some of them,</p> <p>2 like tremolite, the way they're typically distinguished</p> <p>3 in various regulations is by calling the non-asbestos</p> <p>4 one just tremolite, and then calling the asbestos one</p> <p>5 tremolite asbestos, correct?</p> <p>6 A That's correct in some cases, but not all cases.</p> <p>7 Q Well, we'll look at the cases in which it is</p> <p>8 correct. The word tremolite does not mean asbestos,</p> <p>9 correct?</p> <p>10 A If it is a cleavage fragment, that's correct.</p> <p>11 Q The word tremolite does not automatically</p> <p>12 mean asbestos, correct?</p> <p>13 A If it's a cleavage fragment it is not asbestos.</p> <p>14 Q Okay. The word anthophyllite does not mean</p> <p>15 it has to be asbestos, right?</p> <p>16 A No. If it's a cleavage fragment it can be called</p> <p>17 anthophyllite, but also anthophyllite is called it as</p> <p>18 asbestos, too.</p> <p>19 Q We're looking right here, and we could look</p> <p>20 at this and all the regulations if you don't want to</p> <p>21 agree with me on it. There are asbestos types of</p> <p>22 anthophyllite and non-asbestos types of anthophyllite?</p> <p>23 A I absolutely agree.</p> <p>24 Q There are asbestos types of tremolite, there</p> <p>25 are non-asbestos types of tremolite, correct?</p>	<p style="text-align: right;">144</p> <p>1 version of it because it's easier to see. All right.</p> <p>2 I can go to the Elmo.</p> <p>3 All right. That's why I don't usually use</p> <p>4 the Elmo.</p> <p>5 This has, in this EPA regulation, basically</p> <p>6 exactly what we were just talking about, right? Has</p> <p>7 the -- focus -- list of amphiboles, I'll do it in</p> <p>8 another document, too. It has the list of asbestiform</p> <p>9 amphiboles and then non-EPA amphiboles exactly like we</p> <p>10 were discussing; tremolite, actinolite, anthophyllite</p> <p>11 all have non-asbestos forms, correct?</p> <p>12 A Correct.</p> <p>13 Q And that same regulation has various</p> <p>14 definitions -- has a definition of what asbestos is,</p> <p>15 correct?</p> <p>16 A Yes.</p> <p>17 Q And if we look at slide 12, slide 12, that is</p> <p>18 the definition by the EPA of what asbestos is. It has</p> <p>19 to be the asbestiform varieties of the minerals that we</p> <p>20 talked about before, including tremolite and</p> <p>21 actinolite, right?</p> <p>22 A That's what it states.</p> <p>23 Q And if we look at slide 13, I think you</p> <p>24 mentioned this before, it has a definition of</p> <p>25 asbestiform that talks about the mineral fibrosity in</p>
<p style="text-align: right;">143</p> <p>1 A I agree with that, too.</p> <p>2 Q Okay. And to give an example, I know you've</p> <p>3 seen this image before, slide 8, one of the terms, I</p> <p>4 think you used the term today massive form. Sometimes</p> <p>5 it can be called common tremolite, massive tremolite,</p> <p>6 non-asbestos form tremolite. That's where we're</p> <p>7 talking about the non-asbestos tremolite, right?</p> <p>8 A Yes, sir.</p> <p>9 Q Then there's asbestiform tremolite, correct?</p> <p>10 A That is correct.</p> <p>11 Q You talked about various health definitions</p> <p>12 of asbestos and I want to look at a few of what the</p> <p>13 definitions actually are. So let's start with the EPA.</p> <p>14 The EPA is the Environmental Protection Agency,</p> <p>15 correct?</p> <p>16 A That is correct.</p> <p>17 Q And you would agree with me, it is a</p> <p>18 health-based organization, correct?</p> <p>19 A I would agree.</p> <p>20 Q And plaintiffs marked already an EPA</p> <p>21 regulation called the AHERA regulation, and that was</p> <p>22 Plaintiff's Exhibit 936. I want to look at that a</p> <p>23 little bit more closely.</p> <p>24 So if we go to page 80 of it, blow up that</p> <p>25 table, I can barely see it myself here, we'll use our</p>	<p style="text-align: right;">145</p> <p>1 which fibers and fibrils possess high tensile strength</p> <p>2 and flexibility, right?</p> <p>3 A That's what it states.</p> <p>4 Q And those are properties that certain types</p> <p>5 of minerals have because they grow in an asbestiform</p> <p>6 habit, right?</p> <p>7 A Yes, sir. They're fibers.</p> <p>8 Q Well, they grow as fibers. That's how the</p> <p>9 minerals are formed, correct?</p> <p>10 A Correct. The geometrical shape of it.</p> <p>11 Q And OSHA, OSHA is an agency responsible for</p> <p>12 workplace safety and health, correct?</p> <p>13 A Yes, it is.</p> <p>14 Q And if we go to slide 14, OSHA also makes a</p> <p>15 distinction between asbestos amphiboles and</p> <p>16 non-asbestos amphiboles, right?</p> <p>17 A It does.</p> <p>18 Q And they only regulate the ones that are the</p> <p>19 asbestos forms; for example, tremolite asbestos as</p> <p>20 opposed to just tremolite, right?</p> <p>21 A That's what they state.</p> <p>22 Q They specifically do not regulate</p> <p>23 non-asbestiform amphiboles?</p> <p>24 A That's what OSHA states.</p> <p>25 Q And they provide a little bit more detail</p>

37 (Pages 142 to 145)

<p style="text-align: right;">146</p> <p>1 about this, too. If we go to slide 15, OSHA makes</p> <p>2 clear that for purposes of this regulation -- let's</p> <p>3 talk for a second about what I mean by this regulation.</p> <p>4 OSHA has regulations regulating the use and</p> <p>5 exposures to asbestos in the workplace, right?</p> <p>6 A That is correct.</p> <p>7 Q And those regulations are intended presumably</p> <p>8 to help protect workers, correct?</p> <p>9 A I would assume so.</p> <p>10 Q And OSHA says, "For purposes of this</p> <p>11 regulation, the mineral must be one of the six minerals</p> <p>12 covered and must be in the asbestos growth habit."</p> <p>13 Correct?</p> <p>14 A That is correct.</p> <p>15 Q Now I want to talk about cleavage fragments</p> <p>16 so we really know what we're -- what terms we're using</p> <p>17 here. But we have a short video here that I showed in</p> <p>18 opening, if you show slide 16, to explain what a</p> <p>19 cleavage fragment is.</p> <p>20 This is somebody just breaking apart calcite.</p> <p>21 It's not an amphibole mineral. But you can see</p> <p>22 obviously, and I think you'll agree, that you can take</p> <p>23 a non-asbestos mineral and you can break it up into</p> <p>24 pieces, right?</p> <p>25 A Yes, sir.</p>	<p style="text-align: right;">148</p> <p>1 asbestos, right?</p> <p>2 A That is correct.</p> <p>3 Q But as we can see, some of the pieces, when</p> <p>4 you break them up, may be long and thin, right?</p> <p>5 They'll break in all sorts of different shapes and</p> <p>6 sizes, right?</p> <p>7 A Yes.</p> <p>8 Q And you've agreed, I believe, that long, thin</p> <p>9 cleavage fragments can resemble asbestos fibers, right?</p> <p>10 A That's correct.</p> <p>11 Q And so I want to talk about really then what</p> <p>12 is going on here, and let's start with looking at slide</p> <p>13 60. Let's say I have done exactly what I just did,</p> <p>14 break up tremolite, non-asbestos tremolite, and it just</p> <p>15 so happens to break into a piece of this size and</p> <p>16 shape. It's over five microns long. It has more than</p> <p>17 a 5-to-1 aspect ratio, and that's length to width. You</p> <p>18 will call that asbestos?</p> <p>19 A Not me. No. I would call it as the regulated</p> <p>20 asbestos per the counting rules.</p> <p>21 Q Okay. If you saw that piece you would write</p> <p>22 down in your report asbestos when you were saying what</p> <p>23 that was, correct?</p> <p>24 A Following the counting rules, that's correct. If</p> <p>25 it looked just like that, yes.</p>
<p style="text-align: right;">147</p> <p>1 Q And because of the nature of these minerals,</p> <p>2 they may break along what are called cleavage plains,</p> <p>3 correct?</p> <p>4 A Correct.</p> <p>5 Q So if I go back to slide 8, now let's say I</p> <p>6 take the rock on the right, the non-asbestos rock.</p> <p>7 Okay? We're going to start there. And now I'm going</p> <p>8 to go to slide 17. I can take that non-asbestos rock</p> <p>9 and I can start to break it up with, for example, a</p> <p>10 hammer, right? You could do that?</p> <p>11 A You could. Yes.</p> <p>12 Q And if you look at slide 18, you'll start to</p> <p>13 get all sorts of different shapes and sizes as they</p> <p>14 break along cleavage plains, correct?</p> <p>15 A Yes.</p> <p>16 Q And you cannot -- something like this, for</p> <p>17 example, this process of grinding or breaking things</p> <p>18 up, if you have a milling process or you're producing,</p> <p>19 let's say, a talcum powder product, that could also</p> <p>20 result in trace amounts of tremolite, non-asbestos</p> <p>21 tremolite being broken up, right?</p> <p>22 A That's correct.</p> <p>23 Q But there is not some form of magical</p> <p>24 transformation. You can't take pieces of the</p> <p>25 non-asbestos rock and break it up and then call it</p>	<p style="text-align: right;">149</p> <p>1 Q Even though we already just established that</p> <p>2 if that is from a cleavage fragment it's not really</p> <p>3 asbestos, right?</p> <p>4 A If it is actually from a cleavage fragment or it</p> <p>5 actually is asbestos, because you don't start with</p> <p>6 pounding a rock and then knowing what you have. You're</p> <p>7 looking at what the sample is, how it came. So if</p> <p>8 you're looking at a single fiber like this and you</p> <p>9 follow the counting rules by EPA, by OSHA, by ISO, you</p> <p>10 would report that as asbestos.</p> <p>11 Q This is an important issue and I appreciate</p> <p>12 you listening to my question and trying to respond</p> <p>13 directly to me. Okay?</p> <p>14 That structure comes from breaking apart</p> <p>15 non-asbestos tremolite. You would agree with me that</p> <p>16 it's not magically become, in fact, asbestos, right?</p> <p>17 A Yes, sir. I've already agreed to that.</p> <p>18 Q Okay. But you would count it and report it</p> <p>19 in your reports as asbestos, correct?</p> <p>20 A If your hypothetical is true, that is correct.</p> <p>21 Q So I want to talk a little bit about then</p> <p>22 sort of these counting rules and what they really mean;</p> <p>23 do they mean that something is actually asbestos.</p> <p>24 Let's start by talking first about a type of</p> <p>25 microscopy that we haven't mentioned -- well, actually</p>

<p style="text-align: right;">150</p> <p>1 it was shown and not discussed, and that's phase</p> <p>2 contrast microscopy. Can you tell the jury a little</p> <p>3 bit about that?</p> <p>4 A It's an optical microscope and it has a green</p> <p>5 filter that changes the phase slightly of the direction</p> <p>6 of the light so that it gives you a little bit better</p> <p>7 resolution. It's an air sample collected on an air</p> <p>8 filter. And for phase contrast microscopy, which is</p> <p>9 the method that OSHA recommends to determine the amount</p> <p>10 of fibers in the air that NIOSH, National Institutes of</p> <p>11 Occupational Safety and Health uses, and it has a, you</p> <p>12 analyze it at a magnification of 430 times. If you</p> <p>13 have a fiber parallel sides, it's greater than .25</p> <p>14 micrometers in width, greater than five micrometers in</p> <p>15 length, and has an aspect ratio greater than or equal</p> <p>16 to 3, not 5-to-1, but 3-to-1, you count it as a fiber.</p> <p>17 Q Okay. And so phase contrast microscopy is</p> <p>18 used, for example, by OSHA as part of regulating</p> <p>19 asbestos in the workplace, right?</p> <p>20 A It is.</p> <p>21 Q And what are some of the drawbacks of phase</p> <p>22 contrast microscopy in terms of fiber identification?</p> <p>23 A You cannot determine what the fiber is. You</p> <p>24 can't -- it only tells you you have a fiber. It's not</p> <p>25 designed and cannot identify asbestos. It only says</p>	<p style="text-align: right;">152</p> <p>1 A Not really, because fiberglass is so big, it's</p> <p>2 man-made fiber. You can get silica, just silica</p> <p>3 fibers, but fiberglass is typically not one of them.</p> <p>4 It looks completely different.</p> <p>5 Q Okay. So, but those other fibers that you</p> <p>6 mentioned, let's say again talc, they might meet the</p> <p>7 counting criteria for asbestos that was set out by OSHA</p> <p>8 for the workplace, right?</p> <p>9 A Yes, sir.</p> <p>10 Q But they are not asbestos?</p> <p>11 A If you're measuring non-asbestos fibers, no, they</p> <p>12 will not be asbestos.</p> <p>13 Q So the fact that something satisfies or hits</p> <p>14 a counting criteria for asbestos does not make it</p> <p>15 asbestos, correct?</p> <p>16 A It's correct for that technique, but it is not</p> <p>17 correct for the other techniques that actually identify</p> <p>18 the fiber like transmission electron microscopy.</p> <p>19 You're sort of taking the definitions of an orange and</p> <p>20 comparing it to apples.</p> <p>21 Q Okay. Well, if I counted again one of those</p> <p>22 other fibers under the OSHA scheme meets counting</p> <p>23 rules, that doesn't mean that you, Dr. Longo, conclude</p> <p>24 it's asbestos, right?</p> <p>25 A No. I would not. I would use transmission</p>
<p style="text-align: right;">151</p> <p>1 count this and report it as fiber per cc.</p> <p>2 Q And so what sorts of things could be counted</p> <p>3 as positive as asbestos under a phase -- under phase --</p> <p>4 let me start that over.</p> <p>5 What sorts of things other than asbestos</p> <p>6 could be counted as asbestos under OSHA's counting</p> <p>7 rules that use phase contrast microscopy?</p> <p>8 A Anything that is fibrous but you don't just say</p> <p>9 it's asbestos. Usually phase contrast microscopy is</p> <p>10 used in conjunction where they're using asbestos</p> <p>11 products, asbestos added products. So OSHA allows you</p> <p>12 to make the assumption, since it's an</p> <p>13 asbestos-containing product, you can call it asbestos</p> <p>14 fibers. You're not required to go any further than</p> <p>15 that.</p> <p>16 Q We'll talk about that in conjunction thing in</p> <p>17 a minute, but I'm just asking you a simpler question</p> <p>18 first. What kind of fibers, assuming you have a basis</p> <p>19 to use that OSHA fiber counting in a workplace, what</p> <p>20 types of fibers other than asbestos could be counted as</p> <p>21 asbestos under that technique?</p> <p>22 A Fibrous talc, fibrous antigorite, fibrous</p> <p>23 sepiolite; any fibrous material that meets that</p> <p>24 definition.</p> <p>25 Q Fiberglass?</p>	<p style="text-align: right;">153</p> <p>1 electron microscopy that goes in conjunction with that</p> <p>2 method to verify it's asbestos. I would never ever</p> <p>3 take phase contrast microscopy without having any</p> <p>4 knowledge of what's being sampled and call it asbestos.</p> <p>5 That is inappropriate.</p> <p>6 Q We'll talk about your TEM method in a second.</p> <p>7 To close this one out, to give the jury a sense of what</p> <p>8 you mean when you say something is countable or</p> <p>9 regulated, you actually have to look at the regulations</p> <p>10 and not just the counting criteria, right?</p> <p>11 A No. You're comparing phase contrast microscopy</p> <p>12 with TEM. The regulations in those protocols say if it</p> <p>13 meets these definitions, and of course, you're also</p> <p>14 getting the chemistry of the fiber, you're also getting</p> <p>15 the crystalline pattern of the fiber, and it tells you</p> <p>16 in there you will be calling it asbestos to the TEM</p> <p>17 counting rules. You can't take phase contrast</p> <p>18 microscopy and go over and say this is what happens in</p> <p>19 TEM. That's not applicable.</p> <p>20 Q Let's explain -- I think you actually said</p> <p>21 this yourself earlier, which is in OSHA you're dealing</p> <p>22 with a situation where they've already established that</p> <p>23 there are asbestos products being used in the</p> <p>24 workplace, right?</p> <p>25 A If they're using it for that, yes.</p>

<p style="text-align: right;">154</p> <p>1 Q And that's the context in which those</p> <p>2 counting rules exist; the context of that regulation,</p> <p>3 right?</p> <p>4 A That was the main thrust of that regulation</p> <p>5 initially.</p> <p>6 Q So I want to talk then about the context of</p> <p>7 the counting rules that you use. And, for example, you</p> <p>8 talked about using AHERA counting rules, right?</p> <p>9 A Yes.</p> <p>10 Q EPA AHERA?</p> <p>11 A That's correct.</p> <p>12 Q So what does the AHERA statute focus on?</p> <p>13 What does it focus on?</p> <p>14 A It focuses on a lot of things, from maintenance of</p> <p>15 the building to removal to -- are you talking about</p> <p>16 just TEM or --</p> <p>17 Q I'm talking about the regulation as a whole</p> <p>18 focuses on school remediation, right?</p> <p>19 A Yes, sir.</p> <p>20 Q So to put in context where you're getting</p> <p>21 your counting rules that are defining what's asbestos</p> <p>22 in your reports, let's look at slide 61, the counting</p> <p>23 rules you use are part of a method for using TEM to</p> <p>24 determine completion of a remediation in a school,</p> <p>25 right?</p>	<p style="text-align: right;">156</p> <p>1 A For that specific job, yes. But again, it's the</p> <p>2 same counting rules with all the TEM methods, and all</p> <p>3 those other TEM methods don't say anything about</p> <p>4 schools.</p> <p>5 Q But like you said earlier, where in OSHA, in</p> <p>6 a workplace, you can -- you already know there's</p> <p>7 asbestos there, OSHA allows you to make an assumption</p> <p>8 that what you're finding in the air is asbestos, right?</p> <p>9 A Yes. Since the method cannot identify asbestos,</p> <p>10 that is correct.</p> <p>11 Q And there are actually other EPA methods that</p> <p>12 have to do with building materials that contain a lot</p> <p>13 more definition about how you might go about trying to</p> <p>14 distinguish between asbestos and non-asbestos</p> <p>15 amphiboles, right?</p> <p>16 A That's correct for polarized light microscopy,</p> <p>17 yes.</p> <p>18 Q And, in fact, the AHERA statute requires you</p> <p>19 to first look at these materials through polarized</p> <p>20 light microscopy?</p> <p>21 A That's not correct.</p> <p>22 Q Well, it's not worth arguing about either.</p> <p>23 But let's look --</p> <p>24 MS. COOPER: Objection, your Honor.</p> <p>25 THE COURT: Objection sustained. Counsel,</p>
<p style="text-align: right;">155</p> <p>1 A That is correct.</p> <p>2 Q So before those counting rules ever come into</p> <p>3 play, you've had an analysis that has found already in</p> <p>4 that school asbestos-containing materials, right?</p> <p>5 A If it is analyzed, that's correct.</p> <p>6 Q And asbestos-containing materials in that</p> <p>7 regulation means that they're over, what, one percent</p> <p>8 asbestos?</p> <p>9 A Yes, sir.</p> <p>10 Q So you're typically talking about an</p> <p>11 environment in which you know that there are -- you</p> <p>12 already know that there are commercial asbestos</p> <p>13 products, right?</p> <p>14 A If they have tested it or if they have just made</p> <p>15 the assumption it's there.</p> <p>16 Q Then you have a remediation, if necessary,</p> <p>17 right?</p> <p>18 A Yes.</p> <p>19 Q And now you're testing in that known asbestos</p> <p>20 environment, you're looking in the air to see whether</p> <p>21 or not there is still asbestos there or whether you can</p> <p>22 let the kids go back in the school, right?</p> <p>23 A Correct.</p> <p>24 Q And that's the context in which those</p> <p>25 counting criteria appear in AHERA?</p>	<p style="text-align: right;">157</p> <p>1 avoid the arguments.</p> <p>2 BY MR. DUBIN:</p> <p>3 Q Let's look at that. You're familiar with EPA</p> <p>4 R93, right?</p> <p>5 A I am.</p> <p>6 Q And if we look at slide 63, at least for</p> <p>7 light microscopy, these are some of the features that</p> <p>8 the EPA has indicated may help you tell whether what</p> <p>9 you're looking at is either asbestos or a non-asbestos</p> <p>10 material, right?</p> <p>11 A Yes.</p> <p>12 Q So mean aspect ratio is ranging from 20-to-1</p> <p>13 to 100-to-1, and that's simply how long and thin it is,</p> <p>14 or higher for fibers longer than five microns, right?</p> <p>15 A That's what it states.</p> <p>16 Q Very thin fibrils, that's an individual unit</p> <p>17 of asbestos usually less than .5 micrometers in width,</p> <p>18 right?</p> <p>19 A Correct.</p> <p>20 Q And then some other features such as parallel</p> <p>21 fibers occurring in bundles, fiber bundles displaying</p> <p>22 splayed ends, matted masses of curved individual fibers</p> <p>23 and fibers showing curvature, right?</p> <p>24 A Yes.</p> <p>25 Q So it's not, at least in this regulation it's</p>

<p style="text-align: right;">158</p> <p>1 not just about do I see a structure that is over 5.5 2 microns in length and greater than 5-to-1 aspect ratio, 3 right? 4 A Well, no. It would not have that. This is 5 polarized light microscopy. You're trying to compare 6 this to the counting rules for transmission electron 7 microscopy. That's two different things. 8 Q You didn't apply these criteria to your 9 polarized light microscopy, right? 10 A Yes, we did. Everything that we have reported in 11 our polarized light microscopy, because we use the ISO 12 22262-1, the mean aspect ratio of the individual fibers 13 in the bundles all were greater than 20-to-1. Some of 14 them were over 100-to-1. We had some 200-to-1, 15 300-to-1. In bundles. 16 So yes, they're all greater than five 17 micrometers in length. The smallest bundle we found, I 18 think, was 40 to 50 micrometers in length. So as with 19 the EPA, the R93, now this is not the ISO method that 20 we used, but it meets a lot of these criteria. It's 21 not TEM. 22 Q We'll see when we get to your data whether 23 that's correct. 24 Additionally, the other counting criteria 25 that you use is the ISO?</p>	<p style="text-align: right;">160</p> <p>1 scale. These definitions have nothing to do with the 2 actual analysis. 3 Q Okay. Let's look at one more and then I'll 4 ask you that question again. Go to slide 24. And so 5 it also says, "Asbestos, group of silicate minerals 6 belonging in the serpentine and amphibole groups which 7 have crystallized in the asbestiform habit causing them 8 to be easily separated into long, thin, flexible, 9 strong fibers when crushed or processed." Right? 10 That's also in that method? 11 A Correct. 12 Q And as I understand your testimony then, the 13 definitions of asbestos in the methods that you 14 personally use, you say, have nothing to do with 15 whether something is actually asbestos or not? 16 A No. You're kind of mixing it up a little. We 17 were talking about the general definition of 18 asbestiform. This is now talking about asbestos. 19 Crystallized in asbestiform habit, yes. What we 20 determine it is crystallized, it is crystal; and 21 asbestiform means fibrous if you go to the just 22 geological definition. 23 They can be separated in what we find in the 24 long, thin -- well, flexible. Tremolite anthophyllite 25 asbestos is not flexible. And strong fibers when</p>
<p style="text-align: right;">159</p> <p>1 A Yes. 2 Q And if we go to slide 22, that criteria also 3 says that for amphibole to be asbestos it has to be 4 amphibole in the asbestiform habit, right? 5 A Yes, sir. 6 Q And that criteria also says, if we go to 7 slide 23, to be asbestiform it has to be a specific 8 type of mineral fibrosity in which the fibers and 9 fibrils possess high tensile strength and flexibility, 10 right? 11 A That's what it states. 12 Q They're trying to again distinguish between 13 asbestiform amphibole and non-asbestiform amphibole 14 here, right? 15 A No. This is an overall geological definition. It 16 has nothing to do with the actual analysis. 17 Q Nothing to do with the actual analysis 18 because you're saying you're going to rely on the 19 counting criteria? 20 A No. It doesn't have anything to do with the 21 actual analysis because there's no way to determine 22 what high tensile strength is in the analysis. It 23 doesn't even tell you what high tensile strength means, 24 100 PSI, 1,000 PSI. It doesn't tell you how to measure 25 the flexibility because you can't on a microscopic</p>	<p style="text-align: right;">161</p> <p>1 crushed or processed. Again, what's strong mean? 2 Q Okay. What I'm saying to you very clearly is 3 that you don't make an effort beyond just saying what I 4 found is over .5 microns in length and is greater than 5 a 5-to-1 aspect ratio, you don't make any effort to 6 determine whether or not it meets the definitions of 7 how ISO considers -- what ISO considers asbestos to be? 8 A That's not true. We determined that it was 9 crystalline. You can't have something crystalline in a 10 non-crystalline habit. It doesn't work. There's no 11 science behind it. 12 Q We're going to be here for a while. You said 13 you -- 14 MS. COOPER: Objection, your Honor. I think 15 the witness should be able to finish the answer. 16 MR. DUBIN: He did -- 17 THE COURT: Stop. 18 MR. DUBIN: Sorry. 19 A That's fine. We can move along. 20 Q You said you determined that it was 21 crystalline, right? That's what you said you 22 determined about the structures? 23 A Yes. 24 Q But ISO says crystallized in the asbestiform 25 habit, correct, not just that it --</p>

41 (Pages 158 to 161)

<p style="text-align: right;">162</p> <p>1 A I guess I should have finished, asbestiform means 2 fibrous. Everything that we measured was fibrous. In 3 the habit, the crystalline habit is nothing more than a 4 geology definition for geometrical shapes. As we 5 talked about earlier, the geode, that crystallized in a 6 crystalline habit, but in this case it's not fibrous or 7 dendritic or massive. That's all crystallized in a 8 crystalline habit. That's the general definition. 9 Q Let's see how this plays out in the actual 10 context of your reports. 11 A Yes, sir. 12 Q See whether you're actually doing that. 13 Let's go to slide 19, to back up for a 14 second. So as we said, there were some initial reports 15 from April of, I think August and March that related to 16 an initial set of 32 samples, right? 17 A That's correct. 18 Q And I think you said that the reason you 19 tested 32 samples up to the March 2018 report is 20 because that was what was sent to you, correct? 21 A That is correct. 22 Q And actually, to be fair, the testimony 23 should have been that there were 31 sent to you and one 24 bottle that you purchased off the shelf, right? 25 A That is correct.</p>	<p style="text-align: right;">164</p> <p>1 A We do through the actual written portion of it. 2 But the backup data we have in individual notebooks 3 that you can usually go to. I don't put it together 4 like that. 5 MR. HYNES: Dr. Longo, here's your March 11, 6 2018, report and this is the November 14, 2018, report 7 with pagination. 8 THE WITNESS: Thank you. 9 MR. HYNES: You're welcome. 10 BY MR. DUBIN: 11 Q So, if you could turn, I'll cull up a page 12 out of your March 11, 2018, report, page 450. For us 13 it's D-11031. 14 And so, for example, this is an image that 15 you had in your March report, correct? We discussed 16 this image a while back, right? 17 A We did. 18 Q And one of the things I think you even 19 admitted today is that when you see a single fiber like 20 that, you cannot tell whether it is asbestiform, right? 21 A In a vacuum like we talked about, that's correct. 22 Q Okay. And yet, as we pointed out earlier, 23 despite the fact that you cannot make that 24 determination, you called this asbestos in your report, 25 right?</p>
<p style="text-align: right;">163</p> <p>1 Q And we're going to talk about that 2 off-the-shelf bottle later. 3 You didn't talk about these results much 4 today so I'm not going to go into them in depth, but a 5 lot of -- these samples came from predominantly from 6 lawyers for plaintiffs in asbestos litigation, right? 7 A That is correct. 8 Q Many of them were purchased, for example, off 9 of eBay, right? 10 A Two-thirds of them. 11 Q And as of the time of these initial reports, 12 there were two things that were sort of different than 13 your analysis in the more recent ones. First, at that 14 point in time, you were only using TEM and not PLM for 15 your analysis? 16 A That's correct. 17 Q And one of the reasons I think you said at 18 that time is you said that basically PLM wasn't going 19 to work, right? 20 A That's correct. 21 Q And another thing I want to talk about how 22 you were handling this asbestiform issue and the like 23 back then. And what I've done to just try to make this 24 a little easier is you don't add page numbers to 25 your -- page numbers to your reports, huh?</p>	<p style="text-align: right;">165</p> <p>1 A That is correct. It meets the definition of the 2 counting rules by TEM. 3 Q And one of the things that we then see, now I 4 want to talk about your current report, slide -- we go 5 to slide 26. So now you're looking at 54, what we call 6 museum bottles, right? 7 A Yes, sir. 8 Q And what we're going to see here is, we've 9 already said that one of the characteristics of 10 something that's really asbestiform can be bundle 11 formation, right? 12 A Yes, sir. 13 Q Okay. And therefore, whether you identify 14 something as a bundle or as a single fiber when you're 15 looking at a sample can be important, right? 16 A Not for the counting rules, no. It tells you to, 17 it has two or three or more touching fibers, we just 18 follow the counting rules. So it's not important, I 19 understand the debate on it for asbestiform or 20 non-asbestiform. 21 Q Well, one of the things we know is after 22 having been questioned a lot about, well, how can you 23 tell these individual fibers are asbestiform when we're 24 talking about your old reports, in your new reports, 25 museum reports, you call a lot more stuff bundles,</p>

<p style="text-align: right;">166</p> <p>1 right?</p> <p>2 A No. We call, if they are bundles we call them</p> <p>3 bundles. Now, there is more bundles in the population</p> <p>4 we looked at in the museum samples than there were in</p> <p>5 the earlier ones. That is correct.</p> <p>6 Q Well, to compare, if we go to slide 27, for</p> <p>7 example, now in your museum report, I believe to avoid</p> <p>8 this whole asbestiform debate, you now call 93 percent</p> <p>9 of what you're finding bundles. Do you call 93 percent</p> <p>10 of bundles what you're finding in your museum report?</p> <p>11 A The way the question was asked, I'd have to say no</p> <p>12 and yes.</p> <p>13 Q Well, let me then rephrase it to see if we</p> <p>14 can just get a yes.</p> <p>15 You call about 93 percent of what you find in</p> <p>16 your museum report bundles, right?</p> <p>17 A That's correct.</p> <p>18 Q And to give you some examples, I just marked</p> <p>19 this separately so you can have them, 11029 A, and</p> <p>20 10 -- I'm sorry, 11031 A, so you have separately some</p> <p>21 images we're going to talk about. They'll all be in</p> <p>22 your reports, and I'll give you the page cites to make</p> <p>23 it easier for counsel to follow along. And I'll give</p> <p>24 Dr. Longo a copy to make it easier.</p> <p>25 Just so we can see the comparison of some</p>	<p style="text-align: right;">168</p> <p>1 right?</p> <p>2 A Yes, sir. That's what the microscopist stated.</p> <p>3 Q And another reason this distinction can be</p> <p>4 important sometimes is if we look at your November 14,</p> <p>5 2018, report at 340, so that would be out of D-11029,</p> <p>6 sometimes you'll find structures that are simply just</p> <p>7 too wide to be individual asbestos fibers, right?</p> <p>8 A That's correct.</p> <p>9 Q Okay. And so if this isn't a bundle, then it</p> <p>10 would have to be a cleavage fragment, right?</p> <p>11 A For tremolite?</p> <p>12 Q Yes.</p> <p>13 A Those fibers do not get that big, but it is a</p> <p>14 bundle.</p> <p>15 Q Okay. So you call it a bundle and then call</p> <p>16 it asbestos, right?</p> <p>17 A Even if it was too wide, it would still be called</p> <p>18 asbestos, but that is a bundle.</p> <p>19 Q Okay. So it would be called asbestos by you</p> <p>20 even though if it was that wide it would be a cleavage</p> <p>21 fragment?</p> <p>22 A It's not by me. It's the health and safety</p> <p>23 counting rules for these types of structures. But that</p> <p>24 is a bundle.</p> <p>25 Q Okay. And I think your suggestion is that, I</p>
<p style="text-align: right;">167</p> <p>1 things in the old reports you were going to call single</p> <p>2 fibers and now bundles. I showed this slide in</p> <p>3 opening, slide 28. And you'll see these images in what</p> <p>4 I handed to you before, just to verify them. On the</p> <p>5 left, that's from your 3/11/2018 report at page 634,</p> <p>6 and you called that image a single fiber, correct?</p> <p>7 A That's what it states, yes.</p> <p>8 Q Okay. And on the right, that's now from your</p> <p>9 November 14, 2018, report, and now you're calling it,</p> <p>10 that structure, different structure, but you're calling</p> <p>11 that thing a fiber bundle, right?</p> <p>12 A Yes. That's the microscopist who called that.</p> <p>13 Q Okay. And I also showed in the opening slide</p> <p>14 29. So in your old reports, the March 11, 2018,</p> <p>15 report, you called that structure on the left a single</p> <p>16 fiber, right, correct?</p> <p>17 A That's what's in the report, yes.</p> <p>18 Q Okay. In the right, now we're in your</p> <p>19 November 14, 2018, report, on the right you're going to</p> <p>20 call that a fiber bundle, right?</p> <p>21 A Yes, sir.</p> <p>22 Q Another example, slide 30; on the left you're</p> <p>23 going to call that, you called that March 11, 2018,</p> <p>24 that was termed a single fiber, and now on the right,</p> <p>25 November 14, 2018, you're calling that a fiber bundle,</p>	<p style="text-align: right;">169</p> <p>1 guess, it sounds like your suggestion is that somehow</p> <p>2 you're just calling it objectively whether these are</p> <p>3 bundles or fibers. Is that what you're suggesting?</p> <p>4 A I mean, a human does do it, but the human sitting</p> <p>5 at the microscope, where you're looking at it and</p> <p>6 you're putting the binoculars in place and you're</p> <p>7 looking at it 200,000 times and you can focus through</p> <p>8 it, it's their decision to do that.</p> <p>9 Q Let's talk about their decision versus --</p> <p>10 let's first start with, okay, you're saying people</p> <p>11 making this call. Those are your analysts working at</p> <p>12 your lab, right?</p> <p>13 A Yes, sir.</p> <p>14 Q And actually, I know this wasn't the purpose</p> <p>15 of the test, but a little while before you produced</p> <p>16 your report on the museum samples you actually did a</p> <p>17 little test inside MAS of your analysts where they</p> <p>18 looked at the exact same material, same grid squares,</p> <p>19 and they wrote down, among other things, whether they</p> <p>20 thought something was a fiber or a bundle or the like,</p> <p>21 right?</p> <p>22 A Yes. As you pointed out, that wasn't what the</p> <p>23 verification was, but that's what they did.</p> <p>24 Q And that was called the MAS TEM Coefficient</p> <p>25 of Variation for Tremolite Anthophyllite in Talc:</p>

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<p style="text-align: right;">170</p> <p>1 Quality Control Study?</p> <p>2 A Yes, sir.</p> <p>3 Q This is marked as DD-261 -- I'm sorry,</p> <p>4 D-11038. Just for demonstrative purposes.</p> <p>5 MS. COOPER: For demonstrative purposes, your</p> <p>6 Honor.</p> <p>7 THE COURT: What's the marking on that?</p> <p>8 MR. DUBIN: It is D-11038.</p> <p>9 THE COURT: Thank you.</p> <p>10 BY MR. DUBIN:</p> <p>11 Q So one of the things, again, these are your</p> <p>12 analysts looking at the exact same stuff not for</p> <p>13 purposes of the Johnson & Johnson litigation report</p> <p>14 that we're going to talk about, but trying to figure</p> <p>15 out consistency among the analysts, right?</p> <p>16 A It's a little bit more than that. A consistency</p> <p>17 on, if they look at the exact same opening, do they</p> <p>18 count the same number of asbestos structures, so that</p> <p>19 you can get a coefficient of variation for the error in</p> <p>20 the counting the number of structures from one opening</p> <p>21 to the next. That's what it was designed for.</p> <p>22 Q And so we know what the results were in that</p> <p>23 context, if you look at slide 32. Okay. So these were</p> <p>24 various analysts putting down whether they thought</p> <p>25 something they were looking at was a bundle or a fiber,</p>	<p style="text-align: right;">172</p> <p>1 quadrillions of asbestos fiber bundles, so this is just</p> <p>2 one population. It's not surprising to me.</p> <p>3 Q And even this morning you were asked about a</p> <p>4 couple different -- I've cut the pages out to make it a</p> <p>5 little easier for you. You were asked about a couple</p> <p>6 different images by Miss Cooper. (Handing.)</p> <p>7 THE COURT: For the record, that's what you</p> <p>8 handed to the witness?</p> <p>9 MR. DUBIN: Yes, your Honor, for his ease of</p> <p>10 reference. He's already got those full reports up</p> <p>11 there.</p> <p>12 BY MR. DUBIN:</p> <p>13 Q So, for example, if we look at one of your</p> <p>14 reports, D-11029, at page 999, you were shown this</p> <p>15 image this morning by Miss Cooper and I think you said</p> <p>16 that's a single fiber, right? Right?</p> <p>17 A Yes.</p> <p>18 Q And so if it's a single fiber, again then I</p> <p>19 could say, Dr. Longo, you know that seeing a single</p> <p>20 fiber in isolation on TEM, you can't tell whether</p> <p>21 that's asbestiform, right?</p> <p>22 A In a vacuum, that's correct.</p> <p>23 Q But if you called it a bundle then you can</p> <p>24 say well, a bundle by itself is asbestiform because a</p> <p>25 bundle is asbestos, right?</p>
<p style="text-align: right;">171</p> <p>1 among other information, right?</p> <p>2 A Yes. They did put that down.</p> <p>3 Q And if we click through, we'll see there was</p> <p>4 actually only one time that your analysts, outside the</p> <p>5 context of this, all agreed as to what something was,</p> <p>6 correct?</p> <p>7 A Yes and no.</p> <p>8 Q Okay. Well, there was only one time where</p> <p>9 they all agreed as to whether something was a bundle or</p> <p>10 fiber, right?</p> <p>11 A That would be the yes part. But they all agreed</p> <p>12 that this was tremolite, it came from the standard, and</p> <p>13 that their error of coefficient or counting rate error</p> <p>14 for the number of structures was six percent which is</p> <p>15 pretty good.</p> <p>16 Q But then somehow with slide 27, somehow now</p> <p>17 in the -- go to slide 27 -- but somehow now in the</p> <p>18 litigation report against Johnson & Johnson,</p> <p>19 everybody's pretty much coming up bundles in the museum</p> <p>20 report, right?</p> <p>21 A Well, no. It's not somehow. The analyst is</p> <p>22 making the decision. And in a lot of the photographs</p> <p>23 that we didn't look at are clearly looked like have</p> <p>24 fibers sticking out of it. And yes, it's these many</p> <p>25 fibers, but we're dealing with mines that have</p>	<p style="text-align: right;">173</p> <p>1 A Again, if you have no other information you can,</p> <p>2 yes.</p> <p>3 Q And can you tell us what this thing that you</p> <p>4 called a single fiber was classified as in your</p> <p>5 litigation report against Johnson & Johnson? And I</p> <p>6 think it's on page 990, right?</p> <p>7 A Yes. This verification of Lee Poye's analysis</p> <p>8 states, I think this is number structure 3, it states</p> <p>9 that it's a bundle.</p> <p>10 Q Okay. So this morning when you looked at it,</p> <p>11 you said single fiber. In your report it says bundle,</p> <p>12 right?</p> <p>13 A Well, that's not quite fair. What I said this</p> <p>14 morning is it looks like a fiber, but we're looking at</p> <p>15 it on a picture. You have to really for ones that are</p> <p>16 this close, you can see if I look at it closely now.</p> <p>17 But you really need to be at the TEM.</p> <p>18 And what's interesting about this one, as I</p> <p>19 recall, this had already been analyzed by another</p> <p>20 laboratory and I think we're in almost 90 something</p> <p>21 percent agreement for bundles and fibers.</p> <p>22 MR. DUBIN: I'm going to object to the</p> <p>23 non-responsive portion of that answer. Ask it be</p> <p>24 stricken.</p> <p>25 THE COURT: The jury will not consider that</p>

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<p style="text-align: right;">174</p> <p>1 last portion of the testimony. That is stricken from 2 the record. 3 THE WITNESS: I'm sorry, your Honor. 4 THE COURT: Just answer the question being 5 asked, please. 6 BY MR. DUBIN: 7 Q And another example -- may I approach, your 8 Honor? 9 THE COURT: Yes. 10 MR. DUBIN: (Handing.) 11 BY MR. DUBIN: 12 Q The surprise of this is ruined, but if you 13 could cull up just for demonstrative, D-12248, you were 14 asked about this in the deposition recently. Blow up 15 that one right there. You were shown this in a recent 16 deposition and you were asked what is it, right? You 17 recall that? 18 A I do. 19 Q And you said well, definitely asbestiform, I 20 see multiple fibers in the bundles, all that stuff, 21 right? You recall that? 22 A I do. 23 Q And then you were shown what it actually is, 24 correct? 25 A I believe so.</p>	<p style="text-align: right;">176</p> <p>1 A Yes, sir. 2 Q Talk a little bit about testing. 3 First, if we could cull up slide 37, you're 4 familiar with McCrone and McCrone Laboratories, right? 5 A I am. 6 Q So I want to talk a little bit about them 7 because you know that's one of the entities that did 8 testing for asbestos for Johnson & Johnson, right? 9 A I do know that. 10 Q And so we talked a little bit about testing 11 methods this morning and one of the first ones you 12 talked about was the J4-1. If we look at slide 38. 13 So the J4-1 cosmetic industry testing 14 standard, that required the use of XRD and then if XRD 15 is positive, you use PLM, right? 16 A That is correct. 17 Q And you also mentioned some work that you 18 did, if we could show 39, you did work for a company 19 called Scotts at some point, litigation work? 20 A Yes, sir. 21 Q And Scotts, go to slide 40, Scotts testing, a 22 different company, what they did back in the day, the 23 1970s, they did XRD without concentration and PLM 24 without concentration and they did not do any TEM work, 25 right?</p>
<p style="text-align: right;">175</p> <p>1 Q Let's look at that. D-9053. D-9053 for 2 demonstrative purposes only. (Handing.) 3 A Thank you. 4 Q And that sample is actually a sample of 5 non-asbestos tremolite, right? 6 A That's what it states. 7 Q So the one you were calling a bundle of 8 asbestos was actually not asbestos, correct? 9 A I would disagree. 10 Q Okay. It's from a non-asbestos tremolite 11 rock, right? 12 A That's what it states. But I can clearly see the 13 striations in there, so I would disagree with that. 14 Q Okay. So you would disagree with this 15 report. Just to show what it is, go to the first page. 16 This is from the Bureau of Mines, United States 17 Department of the Interior, right? 18 A No, sir. I'm not disagreeing with the document. 19 I think it's a very good document that has a lot of 20 good useful information. I'm just disagreeing on that 21 one structure, in the midst of everything around it is 22 cleavage fragments. I absolutely agree with that. 23 Q We're going to come back to your reports a 24 little bit later, but I'm going to switch gears for a 25 second.</p>	<p style="text-align: right;">177</p> <p>1 A Correct. The labs they used did not do that. 2 Q We know that's not right. They used McCrone. 3 A Correct. But McCrone never told them they should 4 use TEM. 5 Q And one of the things, just talking about, 6 you know, perspective when you're working for a 7 defendant, one of the things you said is that Scotts, 8 it would be unfair to criticize Scotts for not going 9 beyond even just these two methods, XRD and PLM back in 10 the 1970s, right? 11 A That's correct. I stated that. 12 Q And you know that, if we look at slide 41, 13 unlike Scotts and unlike the cosmetic industry at 14 large, Johnson & Johnson did go beyond those two 15 methods to do TEM work, right? 16 A That's correct. 17 Q And I think you said your understanding was 18 it was quarterly testing by TEM? 19 A That's what I thought. 20 Q Okay. You sure about that? 21 A I mean, I don't have the document in front of me. 22 I know they put composites together and by TEM 23 analysis, as I recall, is every three months or every 24 two months. In some cases, sometimes more. 25 Q Okay. Well, we can look at this. It's</p>

45 (Pages 174 to 177)

<p style="text-align: right;">178</p> <p>1 already in evidence, D-7147. This is talking a little 2 bit about some of the testing that Johnson & Johnson 3 was doing. And if you go to the second page, for 4 example, if you look at the top, it says, "TEM 7024 5 biweekly composite samples," right? 6 A Correct. 7 Q So that's biweekly, not quarterly, right? 8 A That's correct. 9 Q That was the TEM method we're talking about, 10 correct? 11 A Yes. 12 Q And one of the slides that I put up said that 13 you -- let me just ask it this way: You have testified 14 before that McCrone was literally the best lab in the 15 country at the time back in the 1970s and 1980s, right? 16 A Yes, sir. I have testified like that in the past. 17 Q And, in fact, you confirmed that McCrone 18 would have been a good choice in the 1970s for a 19 company to go to to test a product like talc by TEM 20 right? 21 A Yes, sir. 22 Q Walter McCrone himself, you said, was one of 23 the best optical microscopists in the world, right? 24 A During his time, that is correct. 25 Q And we've already seen this document before,</p>	<p style="text-align: right;">180</p> <p>1 McCrone Associates wrote and published a test procedure 2 for looking at talc under TEM to determine whether it 3 has asbestos or not, right? 4 A They had a talc method they published, yes. 5 Q In 1990, right? 6 A Yes. In microscopy. 7 Q And what is that, in the journal called The 8 Microscope, right? 9 A Yes. 10 Q A reputable journal? 11 A It's okay. Yes. 12 Q And you have called Dr. Millette a great 13 scientist, correct? 14 A Yes, sir. In this field, I know him for a long 15 time, worked with him. He's a good scientist. We 16 agree on a lot of things and some things we don't. 17 Q He worked for the EPA at its electron 18 microscope lab in Ohio for over a decade, right? 19 A That is correct. 20 Q Written dozens of analytical protocols, 21 correct? 22 A I don't know about dozens, but he's been on a 23 couple. 24 Q He was chair of the asbestos subcommittee of 25 the ASTM?</p>
<p style="text-align: right;">179</p> <p>1 I'll just call it the slide since it's easier. It's in 2 evidence as Defense Exhibit 7216. Can you cull up 3 slide 43? 4 You have seen this document before with 5 McCrone writing, in 1987, that after 15 years of 6 looking at Windsor Minerals talc by TEM, it was their 7 opinion that it was free of asbestos, right? You have 8 seen that before? 9 A I have. 10 Q Okay. And one of the people cc'd on that 11 letter, I want to ask you about, Dr. Jim Millette. 12 That's somebody who you know, correct? 13 A It is. 14 Q And he worked at McCrone at one point, 15 correct? 16 A Yes, sir. He started in 1986, I believe it was, 17 and then worked there until they broke away sometime in 18 the '90s. 19 Q The jury's already seen that he was not only 20 cc'd on this letter but also is on a number of testing 21 reports. But I want to talk about another piece of his 22 involvement in this story. Let's just go to slide 44 23 to make this quicker. 24 You're familiar with that at some point 25 Dr. Millette, he left McCrone, and Thomas Kremer from</p>	<p style="text-align: right;">181</p> <p>1 A He was. 2 Q And what you know to be the fact is if you go 3 to slide 45, this J&J TEM method that we've been 4 talking about is largely identical just to the 5 published method that this person you called a great 6 scientist put into the scientific literature, right? 7 A Yes, sir. 8 Q And there's no, actually nobody from -- no 9 Johnson & Johnson author on the McCrone method, 10 correct? 11 A On the one Jim published, that's correct. 12 Q And if we look at slide 46, this feature of 13 the J&J TEM method that you were talking about earlier 14 or criticizing, this idea that you need to find a 15 certain number of minerals for it to be a quantifiable 16 level of detection, that was just taken straight out of 17 the published method, right? 18 A I'm not sure which way it went since that 7024 19 method was written before Jim Millette got there, but 20 they both have the same thing. 21 Q That method wasn't actually before Jim 22 Millette was there. There was a different -- 23 MS. COOPER: Objection, your Honor. May we 24 approach? 25 THE COURT: Sidebar. Take that down, please.</p>

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<p style="text-align: right;">182</p> <p>1 (Sidebar.)</p> <p>2 THE COURT: What's the nature of the</p> <p>3 objection?</p> <p>4 MS. COOPER: Attorney testifying. I think</p> <p>5 sidebar comments and arguing with the witness.</p> <p>6 THE COURT: Do you want to lay a foundation</p> <p>7 for this?</p> <p>8 MR. DUBIN: I don't know what she's asking me</p> <p>9 to lay a foundation for, but I guess I can rephrase.</p> <p>10 THE COURT: The conclusion that said he</p> <p>11 wasn't there.</p> <p>12 MR. DUBIN: Sure.</p> <p>13 THE COURT: Okay. After this question we'll</p> <p>14 take the afternoon break.</p> <p>15 MR. DUBIN: Sure.</p> <p>16 THE COURT: Thank you.</p> <p>17 (Sidebar ends.)</p> <p>18 THE COURT: Rephrase, please.</p> <p>19 BY MR. DUBIN:</p> <p>20 Q Do you know that there have been a variety of</p> <p>21 different TEM methods by that name over time at Johnson</p> <p>22 & Johnson?</p> <p>23 A There's been variations of it, yes.</p> <p>24 Q Do you know whether James Millette was at</p> <p>25 McCrone when this limit of quantifiable detection</p>	<p style="text-align: right;">184</p> <p>1 phones are turned off.</p> <p>2 (Sidebar.)</p> <p>3 THE COURT: Do we think we'll finish with</p> <p>4 Dr. Longo today?</p> <p>5 MR. DUBIN: Obviously I'm trying to go</p> <p>6 through some stuff laboriously, I'm trying to do it</p> <p>7 quickly.</p> <p>8 THE COURT: The court is not looking to</p> <p>9 shortcut if you want to.</p> <p>10 MR. DUBIN: I intend, I'm doing everything I</p> <p>11 can to get him done today.</p> <p>12 THE COURT: Okay. And that much on redirect</p> <p>13 so far?</p> <p>14 MS. COOPER: Not long, your Honor. I'm</p> <p>15 trying to get Dr. Longo out.</p> <p>16 THE COURT: I just have to remember in case</p> <p>17 the jurors have questions. Okay. So they can stay if</p> <p>18 they have questions. But if it goes over into</p> <p>19 tomorrow --</p> <p>20 MR. DUBIN: No, no. I know he can't come</p> <p>21 back tomorrow, so I'm doing my best.</p> <p>22 THE COURT: Okay. Let's go.</p> <p>23 (Sidebar ends.)</p> <p>24 THE COURT: Mr. Dubin, you may continue.</p> <p>25 BY MR. DUBIN:</p>
<p style="text-align: right;">183</p> <p>1 became part of the J&J method?</p> <p>2 A I'd have to go back and look at one of the earlier</p> <p>3 ones before Jim got there. If you have it, we can take</p> <p>4 a look at it.</p> <p>5 MR. DUBIN: Okay. We can take a break now.</p> <p>6 THE COURT: Okay. Great.</p> <p>7 Members of the jury, we're going to take the</p> <p>8 afternoon break now. 15 minutes. Leave your notebooks</p> <p>9 here. And remember the instructions I've been</p> <p>10 providing to you during the course of this trial: No</p> <p>11 discussions with regard to any aspect of this case,</p> <p>12 including the testimony that you've heard, and no</p> <p>13 research of any kind whatsoever. Enjoy your break.</p> <p>14 For those of you that inquired, we did bring</p> <p>15 extra notebooks in case you need them today as opposed</p> <p>16 to tomorrow. Thank you. Enjoy your break. Be ready</p> <p>17 to come back up at 25 of. Thanks.</p> <p>18 (Jury exits.)</p> <p>19 THE COURT: You may step down. Thank you.</p> <p>20 THE WITNESS: Thank you, your Honor.</p> <p>21 THE COURT: We're off the record. Thanks.</p> <p>22 (Recess: 3:16 p.m. to 3:37 p.m.)</p> <p>23 COURT OFFICER: Jury's entering.</p> <p>24 (Jury enters.)</p> <p>25 THE COURT: Please be seated. Make sure cell</p>	<p style="text-align: right;">185</p> <p>1 Q Moving right along, Dr. Longo. We're trying</p> <p>2 to get you finished today. I know you have scheduling</p> <p>3 issues.</p> <p>4 So we just left off talking a little bit</p> <p>5 about the J&J TEM methods and whether it actually</p> <p>6 changed over time, right?</p> <p>7 A Yes, sir.</p> <p>8 Q I'm not going to go through them all, but I</p> <p>9 just want to at least show you one. This is Defense</p> <p>10 8019.0001. Any objection?</p> <p>11 MS. COOPER: No objection, your Honor.</p> <p>12 THE COURT: Are you seeking admission at this</p> <p>13 time?</p> <p>14 MR. DUBIN: Yes.</p> <p>15 THE COURT: So admitted. Go ahead.</p> <p>16 BY MR. DUBIN:</p> <p>17 Q Perhaps we'll talk more in depth about this</p> <p>18 some other time, but you'll see as a designation for</p> <p>19 this method, determination of asbestos minerals in</p> <p>20 Windsor 66 talc by a transmission electron microscope,</p> <p>21 right?</p> <p>22 A Yes, sir.</p> <p>23 Q And if you look in the upper right it says,</p> <p>24 "TM 7024 A," right?</p> <p>25 A Correct.</p>

47 (Pages 182 to 185)

<p style="text-align: right;">186</p> <p>1 Q And so this was an earlier, I guess maybe</p> <p>2 they should have changed the darn numbers whenever they</p> <p>3 changed the method, but they didn't. So it's still</p> <p>4 called 7024, but you can see that it looks different</p> <p>5 than the other 7024 we were talking about?</p> <p>6 A Yes, sir.</p> <p>7 Q And, for example, this says 1983, so this</p> <p>8 would have been before Jim Millette went to McCrone?</p> <p>9 A That is correct.</p> <p>10 Q And there is no provision in here about limit</p> <p>11 of quantifiable detection or needing to find a certain</p> <p>12 number of fibers for a positive, right?</p> <p>13 A I don't see it.</p> <p>14 Q You don't see that anywhere in that method,</p> <p>15 right?</p> <p>16 A Not in that document. No, sir.</p> <p>17 Q And then do you know when Jim Millette went</p> <p>18 to McCrone?</p> <p>19 A 1986.</p> <p>20 Q '85 maybe, or around that time? Can we agree</p> <p>21 1985 or 1986?</p> <p>22 A We can agree on that.</p> <p>23 Q Okay. It's nice to reach some harmony.</p> <p>24 So again, going back to my point before,</p> <p>25 slide 46, and I think we can also at least agree that</p>	<p style="text-align: right;">188</p> <p>1 Q And the times you've been asked have been in</p> <p>2 courtrooms or legal proceedings, correct?</p> <p>3 A Yes, sir.</p> <p>4 Q And you actually knew Dr. Millette at the</p> <p>5 time that he published that article, right?</p> <p>6 A 1990, I did.</p> <p>7 Q And I think you've said before that he's</p> <p>8 somebody who you have high regard for as a scientist,</p> <p>9 correct?</p> <p>10 A That's correct.</p> <p>11 Q And this idea of detection limits having</p> <p>12 quantifiable limits of detection, that's not unique to</p> <p>13 that J&J TEM method, right?</p> <p>14 A Yes and no. It's certainly not unique, but at</p> <p>15 that concentration and that number of different types</p> <p>16 of asbestos you'd have to have, that is very unique.</p> <p>17 Q Well, there are a number of Government test</p> <p>18 standards for TEM that incorporate detection limits</p> <p>19 whereby you have to find a certain number of asbestos</p> <p>20 fibers before you get a positive, right?</p> <p>21 A Yes and no.</p> <p>22 Q Let me ask you it this way to be clear: You</p> <p>23 will admit that there are a number of Government test</p> <p>24 standards for TEM that incorporate detection limits</p> <p>25 whereby you have to find a certain number of fibers,</p>
<p style="text-align: right;">187</p> <p>1 the provision of the J&J method that you were looking</p> <p>2 at this morning is something that is in the published</p> <p>3 method that was published in The Microscope journal by</p> <p>4 Dr. Millette and Thomas Kremer, right?</p> <p>5 A Yes, sir.</p> <p>6 Q Okay. And one of the reasons to publish in a</p> <p>7 peer-reviewed literature, although there are a number,</p> <p>8 is so others can comment on the method, your</p> <p>9 conclusions, and provide any criticisms, right?</p> <p>10 A And the use of method if they so choose.</p> <p>11 Q Right. And you know scientists can write in</p> <p>12 and say this method is flawed, it's a bad one, et</p> <p>13 cetera, right?</p> <p>14 A I think so. I'm not sure what the policy is of</p> <p>15 that journal, Microscopy, about letters to the editor.</p> <p>16 Q And you aren't aware of any published</p> <p>17 criticisms of this talc-testing method that Johnson &</p> <p>18 Johnson adopted that appeared in The Microscope around</p> <p>19 this time, right?</p> <p>20 A That's correct.</p> <p>21 Q The only place or time you said recently that</p> <p>22 you've ever criticized this particular talc-testing</p> <p>23 procedure is in a courtroom or some other legal</p> <p>24 proceeding, correct?</p> <p>25 A Where I've been asked. Yes, sir.</p>	<p style="text-align: right;">189</p> <p>1 right?</p> <p>2 A I agree that there is typically two to three</p> <p>3 fibers, but it's not like J&J's or McCrone's where you</p> <p>4 have to find multiple types of asbestos.</p> <p>5 Q Sir, I'm asking a simple question. Give me</p> <p>6 an answer or we can look at a transcript.</p> <p>7 You admit there are a number of Government</p> <p>8 test standards for TEM that incorporate detection</p> <p>9 limits whereby you have to find a certain number of</p> <p>10 fibers. Is that correct or incorrect?</p> <p>11 A That statement like it is is correct.</p> <p>12 Q Okay. Thank you.</p> <p>13 And, in fact, if we look back at slide 2, we</p> <p>14 talked about this earlier, the gentleman on the left is</p> <p>15 George Yamati?</p> <p>16 A Yes, sir.</p> <p>17 Q And did he write a method that indicated you</p> <p>18 had to find a certain number of fibers in a test sample</p> <p>19 to achieve statistical significance?</p> <p>20 A That is correct.</p> <p>21 Q Okay. And that number that he used was 18</p> <p>22 fibers, right?</p> <p>23 A Yes. There's a reason for that, but that's</p> <p>24 correct.</p> <p>25 Q The reason, you've said that before, is</p>

48 (Pages 186 to 189)

<p style="text-align: right;">190</p> <p>1 because he believed that there might be chrysotile 2 asbestos even in the actual filters they were using, 3 right? 4 A Well, it's more than a belief. That was a problem 5 in the manufacturing for polycarbonate filters. They 6 were pre-contaminated before they got to your lab. 7 Q Okay. Irrespective, he recommended an 18 8 fiber limit for statistical significance, right? 9 A Again, it depended on what was on the background. 10 It was a range depending on what you found. So it 11 wasn't just 18. 12 Q And I think you've agreed before, I think you 13 know where I'm going, but it's important, when 14 evaluating a method, to know what its analytical 15 sensitivity is, right? 16 A Yes, sir. 17 Q And it's also important to know what your 18 detection limit is, right? 19 A Correct. 20 Q And you produced, originally produced your 21 March 11, 2018, report in an electronic format, right? 22 A Yes, sir. 23 Q And you produced them as PDFs, correct? 24 A That's correct. 25 Q I'm not going to belabor this, but -- and</p>	<p style="text-align: right;">192</p> <p>1 First of all, you gave a percentage by PLM, 2 and what was the percentage you were saying of asbestos 3 in the product by PLM? 4 A It ranged from less than .1 percent, and for some 5 of the -- some of the, I believe it was the Asian, I 6 think it was as high as .2 or .1. 7 Q Those numbers are not actually the percentage 8 that you're finding in the products, right? 9 A It's the percentage found in the heavy liquid 10 density portion of it. 11 Q Right. So what you're actually reporting, 12 'cause you admit you made it sound like that was the 13 percentage in the bottle, right? 14 A It's the percentage of what was found on the 15 slide. 16 Q Okay. That's certainly not what you said 17 this morning, right? 18 A I'm not sure. But that's the percentage they 19 found. 20 Q What it really is, is after you do the heavy 21 density liquid separation, you've separated out what 22 you want to separate out, right? 23 A Correct. 24 Q Then you're testing that separated out part 25 and that's the percentage you're talking about?</p>
<p style="text-align: right;">191</p> <p>1 take our time up, as I think you'll agree with me that 2 this is what happens, if we can show slide 48. At some 3 point we discovered something about your electronic 4 reports, and you remember us going through this, right? 5 A I do. 6 Q What happens is that there are certain data 7 in your reports that is whited out electronically, 8 correct? 9 A The detection limit and analytical sensitivity 10 because of the analysis, that's correct. 11 Q So I don't know if this -- so what happened 12 is if you put your cursor over a blank spot in your 13 report and you press delete, this white box that was 14 covering up certain data disappears and you can 15 actually see that there used to be something in the 16 report before you gave it to us, right? 17 A That's correct. 18 Q And that's the information on your reports, 19 detection limits and analytical sensitivities, correct? 20 A That's correct. 21 Q It's much faster to do it that way, right? 22 All right. So I want to talk a little bit 23 about, you skipped some stuff so I'm skipping some 24 stuff, the percentages in the product that you 25 mentioned earlier today.</p>	<p style="text-align: right;">193</p> <p>1 A What was seen on that slide. That's correct. 2 Q Right. So it is not representing, there's no 3 data there that's representing how much asbestos there 4 is in the product in the beginning, right? 5 A Well, not exactly. No. We also have the ISO PLM 6 that's not using heavy liquid and they usually 7 correlate, so the analyst takes that into account. 8 Occasionally you'll have it higher in the Blount, but a 9 lot of the times it's less than .1 percent and it's the 10 same. 11 Q But all of your ISO work that did not involve 12 concentration, if you reported concentration at all, 13 you just report it as below .1 percent, right? 14 A Yes, sir. 15 Q So this .2 percent, .3 percent you were 16 talking about by weight is from PLM that does not 17 relate to a percentage in the product? 18 A I'm just looking through the PLM. 19 THE COURT: For the record, which report are 20 you looking at, Dr. Longo? 21 THE WITNESS: I'm sorry, your Honor. I'm 22 looking at November 14. 23 THE COURT: Thank you. 24 A I think that is true, only in the Asian samples, 25 unless I'm missing something.</p>

49 (Pages 190 to 193)

<p style="text-align: right;">194</p> <p>1 Q None of the samples relevant to these</p> <p>2 exposures having to do with Italy and Vermont?</p> <p>3 A That's correct.</p> <p>4 Q So again, if somebody comes up and says oh,</p> <p>5 well, Dr. Longo said I found .2 or .3 by weight, by PLM</p> <p>6 in the bottle as opposed to your concentrate, that</p> <p>7 wouldn't be correct, right?</p> <p>8 A If it's just in the concentrate it's probably a</p> <p>9 factor of approximately ten, so instead of less than</p> <p>10 0.1, it's still less than 0.1.</p> <p>11 Q And this morning you mentioned a bunch of</p> <p>12 numbers about how many fibers per gram there were of</p> <p>13 whatever you're calling asbestos in the museum samples.</p> <p>14 You recall discussing the fiber per gram numbers?</p> <p>15 A Yes.</p> <p>16 Q But you actually also have weight percentages</p> <p>17 for your TEM analysis that you didn't discuss this</p> <p>18 morning, right?</p> <p>19 A That is correct.</p> <p>20 Q And if we look at those just basically, slide</p> <p>21 54, at least in the museum samples that you said you</p> <p>22 were relying on for today, the highest concentration</p> <p>23 was around .0092 of a percent, or 9.2 thousandths of a</p> <p>24 percent, right?</p> <p>25 A That is correct.</p>	<p style="text-align: right;">196</p> <p>1 you had received, right?</p> <p>2 A Correct.</p> <p>3 Q You were also deposed in, let's look at slide</p> <p>4 35, put this in time period. You were deposed at some</p> <p>5 point in a case called Wittman?</p> <p>6 Do you recall that at all?</p> <p>7 A No.</p> <p>8 Q Well --</p> <p>9 MS. COOPER: Your Honor, objection. May we</p> <p>10 approach?</p> <p>11 THE COURT: Sure. Take that down, please.</p> <p>12 (Sidebar.)</p> <p>13 MS. COOPER: Your Honor, I am just worried</p> <p>14 about getting into improper impeachment when we haven't</p> <p>15 identified when and where, what deposition. He's just</p> <p>16 said he doesn't even know about this. I just want to</p> <p>17 make sure. But if they're going to first impeach him</p> <p>18 they need to give him some context what we're talking</p> <p>19 about before we show it.</p> <p>20 MR. DUBIN: I haven't started to impeach him</p> <p>21 yet. I am simply putting some dates down to get</p> <p>22 oriented for some questions.</p> <p>23 THE COURT: Nothing that I've heard this far</p> <p>24 has been objectionable. Asking him if he recalls</p> <p>25 testifying in a particular case is not improper. I</p>
<p style="text-align: right;">195</p> <p>1 Q Okay. I want to talk to you about -- I want</p> <p>2 to talk to you about one more issue for now. And let's</p> <p>3 start with slide 34. And I want to talk to you about</p> <p>4 testing of off-the-shelf bottles.</p> <p>5 So to orient ourselves, I think we had</p> <p>6 already talked about this, that in your initial reports</p> <p>7 you tested 31 bottles from plaintiffs' law firms and</p> <p>8 one bottle that MAS purchased off the shelf, right?</p> <p>9 A Yes.</p> <p>10 Q All of the 31 that you received from</p> <p>11 plaintiffs' law firms were not sealed, correct?</p> <p>12 A They were all not sealed.</p> <p>13 Q Right. The only sealed bottle was one that</p> <p>14 you purchased, that you reported on was one that you</p> <p>15 purchased off the shelf, and you did not detect any</p> <p>16 asbestos in that off-the-shelf bottle, right?</p> <p>17 A That is correct.</p> <p>18 Q You said that you had purchased about 15 to</p> <p>19 20 off the shelf, but you didn't test any of the others</p> <p>20 that MAS purchased off the shelf, right?</p> <p>21 A That is correct.</p> <p>22 Q And if we go to slide 19. As I think we</p> <p>23 said, you've testified before that the reason that</p> <p>24 there are 32 bottles discussed up until the March 20,</p> <p>25 '18, report is that those -- that because that's what</p>	<p style="text-align: right;">197</p> <p>1 understand the point. I think counsel is trying to get</p> <p>2 us through this.</p> <p>3 (Sidebar ends.)</p> <p>4 THE COURT: You may continue. Put that back</p> <p>5 up.</p> <p>6 BY MR. DUBIN:</p> <p>7 Q And I'm going to hand you a copy of your</p> <p>8 deposition in case you need to refresh your</p> <p>9 recollection of anything. And one of the things that</p> <p>10 you told us in November of 2017 was that you had not</p> <p>11 done any analysis of any Johnson & Johnson Baby Powder</p> <p>12 or Shower to Shower at that point, other than the</p> <p>13 ones -- 30 that had been in your earlier August report,</p> <p>14 and then you included in your March report, as I said,</p> <p>15 one more Lanier sample and that was from eBay and your</p> <p>16 MAS off-the-shelf bottle, right?</p> <p>17 A I don't recall that, but that's probably correct.</p> <p>18 Q Well, maybe you can just refresh your</p> <p>19 recollection, if you want to read. But I think you</p> <p>20 told us at that time that you hadn't done any TEM</p> <p>21 analysis on any additional J&J samples other than the</p> <p>22 one Lanier sample and the MAS control bottle, right?</p> <p>23 A I don't recall saying that.</p> <p>24 Q Why don't you read your deposition? You can</p> <p>25 just see if it refreshes your recollection. If you</p>

<p style="text-align: right;">198</p> <p>1 look at 85:25 through 86:23. Read it to yourself for 2 now. 3 A Okay. 4 Q So you told us that other than the two 5 additional that would end up making 32 by March of 6 2018, that at the time of the Wittman deposition in 7 November 2017, you hadn't done any TEM analysis on any 8 additional J&J samples, right? 9 A That's what I must have thought at the time. Yes, 10 sir. 11 Q That's what you swore to under oath, correct? 12 A I believed it, yes. 13 Q You believed it. Do you now believe it? 14 A It's been a lot of samples. 15 Q Well, when you told us the reason there were 16 32 in the March 2018 report because that was what you 17 had received, that was false testimony, correct? 18 A I'm sure that is. 19 Q When you told us in Wittman that you had at 20 that time in November only looked at the 30 bottles 21 plus the two that would go in your March 2018 report, 22 that was also false testimony, correct? 23 A Again, I don't recall that. 24 Q Okay. Let's look at it. (Handing.) 25 THE COURT: What have you handed the witness?</p>	<p style="text-align: right;">200</p> <p>1 CERTIFICATION 2 3 I, ANDREA F. NOCKS, C.S.R., License Number 4 30XI00157300, an Certified Court Reporter in and for the 5 State of New Jersey, do hereby certify the foregoing to 6 be prepared in full compliance with the current 7 Transcript Format for Judicial Proceedings and is a true 8 and accurate non-compressed transcript to the 9 Best of my knowledge and ability. 10 11 <%10613,Signature%> 12 ANDREA F. NOCKS March 5, 2019 13 CERTIFIED COURT REPORTER DATE 14 MIDDLESEX COUNTY COURTHOUSE 15 16 17 18 19 20 21 22 23 24 25</p>
<p style="text-align: right;">199</p> <p>1 MR. DUBIN: I've handed the witness a report 2 in another case that he has issued entitled "Analysis 3 of Johnson & Johnson Baby Powder, Valeant Shower to 4 Shower Talc Products For Amphibole Asbestos," and I 5 labeled it D-12 -- 12249. 6 THE COURT: Thank you. 7 BY MR. DUBIN: 8 Q Look at excerpts from that report. I'll hand 9 you up the excerpts D-11249 A. 10 So we still have the timing let's back up 11 again, slide 35. Have you had a chance to look at the 12 materials that I provided to you? 13 A Yes. 14 MR. DUBIN: And for demonstrative purposes, 15 D-12249 A. 16 MS. COOPER: No objection to demonstrative 17 purposes, your Honor. 18 THE COURT: Fine. 19 (Continuation of the day's proceedings in 20 Volume 2.) 21 22 23 24 25</p>	

Exhibit 83

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA

2 COUNTY OF ALAMEDA

3 BEFORE THE HONORABLE FRANK ROESCH

4 DEPARTMENT 17

5 ---000---

6 PATRICIA SCHMITZ,

7 Plaintiff,

8 vs.

No. RG18923615

9 JOHNSON & JOHNSON, et
10 al.,

Defendants.

11 _____/

12 REPORTER'S TRANSCRIPT OF PROCEEDINGS

13 (William Longo, Ph.D.)

14 Tuesday, April 30, 2019

15 Full Session

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19 Taken before EARLY K. LANGLEY
20 RMR, RSA, B.A.
CSR No. 3537

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DEFENDANT'S

ID

EV

WD

(No exhibits handled on the
record.)

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P R O C E E D I N G S

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Tuesday, April 30, 2019 - 8:44 a.m.

(Morning Session)

(Whereupon, the following proceedings were held
outside the presence of the jury:)

THE COURT: On the record.

This is Schmitz v. Johnson & Johnson and
Colgate.

If I might impose on the lawyers to state your
names for the record.

MR. SATTERLEY: Good morning, Your Honor. Joe
Satterley for the plaintiff.

MS. CLANCY: Good morning, Your Honor. Denyse
Clancy for the plaintiff.

MR. CALFO: Good morning, Your Honor.
Alexander Calfo for the Johnson & Johnson defendants.

MR. BATTLE: Good morning, Your Honor. Mike
Battle for the Johnson & Johnson defendants.

MR. GARY SHARP: Good morning, Your Honor.
Gary Sharp and Pete Mularczyk.

MR. ANDREW SHARP: Good morning, Your Honor.
Andrew Sharp for Colgate.

THE COURT: All right. Counsel had an

1 agreement about one document and we're just going to
2 put that into evidence.

3 What number is it?

4 MR. SATTERLEY: Well, Your Honor, so the record
5 is perfected, what we're moving into evidence is all
6 the Scala documents, and they have objections to
7 several of them. So.

8 THE COURT: We're only going to deal with
9 Number 3611 at this point in time.

10 MR. SATTERLEY: But the ones they didn't object
11 to, Your Honor, there's some testing documents in the
12 ones they don't object to that I would typically use.

13 THE COURT: All right.

14 MR. SATTERLEY: So if I could go ahead and seek
15 admission of all the Scala documents to which they do
16 not object and I can identify for the record those
17 numbers.

18 THE COURT: I had forgotten that there was a
19 lot of numbers. The list that I had was only the
20 contested ones.

21 MR. SATTERLEY: So there's no objection to 3571
22 which was Exhibit 4 to Scala.

23 THE COURT: Mr. Bir, are you getting these?

24 MR. GARY SHARP: No objection, Your Honor.

25 MR. SATTERLEY: There's no objection to 3572,

1 which was Exhibit 5 to the Scala deposition. We'll put
2 Exhibit 6 to the side; we still need to resolve that
3 one. Put Exhibit 7 to the side; we still need to
4 resolve that one.

5 So let me just move forward to the next one
6 where there's no objection.

7 That would be Exhibit 16, which is
8 Exhibit 3583. There's no objection to 3583.

9 MR. GARY SHARP: No objection, Your Honor.

10 MR. SATTERLEY: There's no objection to 3584,
11 which is Exhibit 17 to Scala's deposition.

12 THE COURT: We'll get them all at once.

13 MR. SATTERLEY: There's no objection to 3585,
14 which is Exhibit 18.

15 THE COURT: Just give me the numbers.

16 MR. SATTERLEY: 3586.

17 3587.

18 MR. MULARCZYK: I'm sorry. Could we do it by
19 the Scala deposition number. That's how we have it
20 listed.

21 THE COURT: Mr. Satterley, you're going to have
22 to give me both numbers.

23 MR. SATTERLEY: I'll go back to Exhibit 19,
24 which was 3586.

25 Exhibit 20 is 3587.

1 Exhibit 24, which is 3591.

2 Exhibit 31, which is 3598.

3 Exhibit 35, which is 3602.

4 Exhibit 38, which is 3605.

5 Exhibit 39, which is 3606.

6 Exhibit 40, which is 3607.

7 Exhibit 41, which is 3608.

8 Exhibit 43, which is 3610.

9 And the one that I think counsel just indicated
10 they're going to withdraw their objection is 3611,
11 which is Scala Exhibit 44.

12 Exhibit 45 is 3612.

13 Exhibit 46 is 3613.

14 Exhibit 47 is 3614.

15 We seek the admission of each of those at
16 this -- at the time, Your Honor.

17 THE COURT: All right. As soon as Mr. Sharp
18 and Mr. Mularczyk are ready, we'll hear from them.

19 Do you stipulate all of those into evidence?

20 MR. GARY SHARP: Yes, Your Honor.

21 THE COURT: All right. Mr. Calfo.

22 MR. CALFO: Yes, Your Honor.

23 THE COURT: Have you any objection to any of
24 those exhibits?

25 MR. CALFO: No, Your Honor.

1 THE COURT: All right. So the record is
2 accurate, these are the exhibits that are being
3 admitted into evidence:

4 3571, 3572, 3583, 3584, 3585, 3586, 3587, 3591,
5 3598.

6 3602, 3605, 3606, 3607, 3608, 3610, 3611, 3612,
7 3613, and 3614.

8 Those are all in evidence.

9 (Whereupon, Plaintiff's Exhibit 3571 was
10 received into evidence.)

11 (Whereupon, Plaintiff's Exhibit 3572 was
12 received into evidence.)

13 (Whereupon, Plaintiff's Exhibit 3583 was
14 received into evidence.)

15 (Whereupon, Plaintiff's Exhibit 3584 was
16 received into evidence.)

17 (Whereupon, Plaintiff's Exhibit 3585 was
18 received into evidence.)

19 (Whereupon, Plaintiff's Exhibit 3586 was
20 received into evidence.)

21 (Whereupon, Plaintiff's Exhibit 3587 was
22 received into evidence.)

23 (Whereupon, Plaintiff's Exhibit 3591 was
24 received into evidence.)

25 (Whereupon, Plaintiff's Exhibit 3598 was

1 received into evidence.)

2 (Whereupon, Plaintiff's Exhibit 3602 was
3 received into evidence.)

4 (Whereupon, Plaintiff's Exhibit 3605 was
5 received into evidence.)

6 (Whereupon, Plaintiff's Exhibit 3606 was
7 received into evidence.)

8 (Whereupon, Plaintiff's Exhibit 3607 was
9 received into evidence.)

10 (Whereupon, Plaintiff's Exhibit 3608 was
11 received into evidence.)

12 (Whereupon, Plaintiff's Exhibit 3610 was
13 received into evidence.)

14 (Whereupon, Plaintiff's Exhibit 3611 was
15 received into evidence.)

16 (Whereupon, Plaintiff's Exhibit 3612 was
17 received into evidence.)

18 (Whereupon, Plaintiff's Exhibit 3613 was
19 received into evidence.)

20 (Whereupon, Plaintiff's Exhibit 3614 was
21 received into evidence.)

22 MR. SATTERLEY: With this witness we've met and
23 conferred; we have some agreements regarding
24 admissibility of exhibits with the -- prior to
25 Dr. Longo's testimony.

1 THE COURT: All right. Do you want to state
2 those?

3 MR. SATTERLEY: Yes, Your Honor. These are all
4 photographs that relates to the testing of the J&J, the
5 Colgate.

6 THE COURT: Just tell me the exhibit numbers.

7 MR. SATTERLEY: Yes, Your Honor.

8 1065, 1080, 1081, 1082, 1083, and 1084, 1091,
9 1092, 1093, 1096, 1097, 1098.

10 Should be a total of 12 exhibits. I have them
11 for Your Honor in binders organized. I provided them
12 to counsel both electronically and a hardcopy. It's my
13 understanding there's no objection with the exception
14 of J&J has objections to photographs of the J&J bottle
15 that accompanies the -- each -- they don't have
16 objection for demonstrative purposes, but they don't
17 want the actual photograph of the bottle to be received
18 into evidence.

19 THE COURT: Is the photograph part of the
20 exhibit?

21 MR. SATTERLEY: Yes. It is, Your Honor.

22 THE COURT: How can I accept part of an exhibit
23 into evidence?

24 MR. SATTERLEY: I wanted to resolve that issue
25 with Your Honor, show Your Honor the exhibit.

1 THE COURT: All right.

2 MR. SATTERLEY: And I've tendered to
3 Your Honor --

4 THE COURT: Which number --

5 MR. SATTERLEY: This is 1080, Exhibit 1080, if
6 you go behind Tab Number 1. Tabs 2 through 11 there's
7 no objections to. Tab 1. Tab 1 is -- and what
8 occurred here, Your Honor, is J&J produced these
9 photographs in response to discovery under -- behind
10 Tab 1.

11 And these were the actual bottles that
12 Dr. Longo, the samples came from. And so, for example,
13 to put in context, if we could go to the fourth
14 photograph on page 4 of 1080, you'll see that J&J has
15 marked the date of the product, and so this is
16 important evidence for the jury to consider in context
17 of the sample that's being analyzed, and many of these
18 bottles have the dates on them and J&J provided those
19 dates -- provided these bottles to us exactly in this
20 fashion.

21 So it puts context on the date of the sample in
22 question. And these are the historical.

23 So like I said, all the photographs behind
24 Tabs 2 through 11, there's no objection to. That's the
25 testing -- the photographs of the actual test.

1 THE COURT: So what you're telling me is that
2 there's more than one bottle that is pictured?

3 MR. SATTERLEY: That's --

4 THE COURT: And these are the bottles that the
5 samples that Longo tested actually came in.

6 MR. SATTERLEY: Came from.

7 THE COURT: Came from.

8 MR. SATTERLEY: Because J&J's labs made the
9 sample splits and then with the chain of custody said
10 this is the sample you're getting and --

11 THE COURT: I understand. I'm just asking
12 questions here. And the writing on the -- the typed
13 writing that's taped to one bottle, for example, is
14 something that was written by Johnson & Johnson and
15 taped on to the bottle by Johnson & Johnson.

16 MR. SATTERLEY: That's the way that it was
17 produced in the course of discovery, Your Honor.

18 THE COURT: So if you ask your witness, Longo,
19 do you recognize these and he's going to say that's
20 exactly how I got them from Mr. Satterley.

21 MR. SATTERLEY: The samples were not received
22 in the bottles themselves. The samples -- J&J's own
23 lab took the samples and gave us the sample numbers.
24 You can see it says "JPBP" -- it's got a number of 188
25 or 093, and the chain of custody document matches up so

1 the dates are matched up, and he can explain that
2 through the chain of custody process.

3 But this just gives the context to the dates.

4 Counsel advised me they have no objection to
5 demonstrative for these. At the very least, I'd like
6 to demonstrate some of these, but I think they're
7 actually -- should come into evidence so the jury can
8 evaluate the dates of the various samples as
9 represented by J&J.

10 THE COURT: All right.

11 Ms. Steinmann, you're standing there.

12 MS. STEINMANN: Your Honor.

13 THE COURT: I presume that you're going to tell
14 me what the objection is.

15 MS. STEINMANN: The objection is just that
16 these aren't evidence of anything in this case.
17 Dr. Longo is going to be able to tell the jury what the
18 dates were and there is no reason to put in 99 photos
19 of different Johnson & Johnson bottles. It's not
20 evidence of anything. Demonstrative-wise I agree --

21 THE COURT: That's not an evidentiary
22 objection. Maybe it's a -- maybe the argument is 352
23 cumulative. But the concept that they don't need to is
24 not --

25 MS. STEINMANN: Sorry, Your Honor. Formal

1 objection --

2 THE COURT: They have to -- they get to put on
3 their case.

4 MS. STEINMANN: Formal objection is 352. I was
5 just explaining the reasons for our objection, which is
6 I believe these are fair for a demonstrative, but I
7 don't think they have any relevance to go back to the
8 jury. And she didn't use those bottles, and we just
9 don't want the jury to get the misimpression that all
10 of these bottles came from Mrs. Koretoff --
11 Mrs. Schmitz, I'm sorry.

12 THE COURT: Okay. If that's the objection,
13 it's overruled.

14 MS. STEINMANN: Thank you, Your Honor.

15 THE COURT: So what number is that exhibit?

16 MR. SATTERLEY: That's 1080.

17 THE COURT: All right. The following
18 exhibits -- other than that one, do you stipulate that
19 all the rest of the list that was read by Mr. Satterley
20 may be admitted into evidence?

21 MS. STEINMANN: Your Honor, I believe I was
22 walking in, but if it's what he said to me --

23 THE COURT: I'll read it to you, if you'd like.

24 MS. STEINMANN: Okay.

25 Is this it?

1 MR. SATTERLEY: I provided hardcopies to -- to
2 all counsel. These are the J&J's and Colgate is right
3 there.

4 MS. STEINMANN: Just give me one second to get
5 through them.

6 THE COURT: Of course.

7 MS. STEINMANN: Yes, Your Honor. This appears
8 to be what was sent to us and we did stipulate to
9 these.

10 THE COURT: All right. Mr. Sharp, have you any
11 objection to any of these exhibits?

12 MR. GARY SHARP: No, Your Honor.

13 MR. MULARCZYK: Your Honor, I just have one
14 objection. I'm sorry. Are we talking about the
15 Johnson & Johnson ones or the ones pertaining to
16 Colgate?

17 THE COURT: Yes. We're talking about the 1065
18 through 1098 list that was read into the record by
19 Mr. Satterley.

20 MR. MULARCZYK: So the only objection that I
21 have -- I'm okay with all the photographs. The one
22 objection I have is a document here. It's a chain of
23 custody document. It's 1096. And my objection is that
24 this contains a list of samples that aren't at issue in
25 this case and that Dr. Longo is not relying on.

1 So.

2 MR. SATTERLEY: Are you talking about this list
3 right here?

4 MR. MULARCZYK: Correct.

5 THE COURT: What number?

6 MR. MULARCZYK: There's a whole host of samples
7 that are not subject to this case at all in this list.
8 This is 1096.

9 THE COURT: I understand, but in this binder
10 what tab is it?

11 MR. SATTERLEY: Your Honor, you don't have the
12 correct binder right there. 1096. If I could tender
13 it to the Court. It's in the second box.

14 This is the first I'm hearing of this
15 objection, but I can agree if they don't cross-examine
16 on -- that he didn't test these other 43 bottles -- or
17 41 bottles, I will agree to redact that and only put
18 the ones -- the bottles that he did test. What
19 occurred -- well -- and that's my offer is, as long as
20 they don't cross-examine on those other bottles that
21 were not tested, I have no problem redacting this
22 document and making it only the bottles that were
23 tested.

24 THE COURT: All right. So we'll redact the
25 bottles that weren't tested.

1 MR. SATTERLEY: Yes.

2 THE COURT: That sounds like a perfectly good
3 way of approaching the problem.

4 MR. SATTERLEY: Yes, Your Honor.

5 MR. MULARCZYK: Thank you, Your Honor.

6 THE COURT: Okay. So, for the record, the
7 following exhibits are admitted into evidence:

8 1065, 1080, 1081, 1082, 1083, 1084, 1091, 1092,
9 1093, 1097, 1098.

10 (Whereupon, Plaintiff's Exhibit 1065 was
11 received into evidence.)

12 (Whereupon, Plaintiff's Exhibit 1080 was
13 received into evidence.)

14 (Whereupon, Plaintiff's Exhibit 1081 was
15 received into evidence.)

16 (Whereupon, Plaintiff's Exhibit 1082 was
17 received into evidence.)

18 (Whereupon, Plaintiff's Exhibit 1083 was
19 received into evidence.)

20 (Whereupon, Plaintiff's Exhibit 1084 was
21 received into evidence.)

22 (Whereupon, Plaintiff's Exhibit 1091 was
23 received into evidence.)

24 (Whereupon, Plaintiff's Exhibit 1092 was
25 received into evidence.)

1 (Whereupon, Plaintiff's Exhibit 1093 was
2 received into evidence.)

3 (Whereupon, Plaintiff's Exhibit 1097 was
4 received into evidence.)

5 (Whereupon, Plaintiff's Exhibit 1098 was
6 received into evidence.)

7 (Whereupon, Plaintiff's Exhibit 1096 was marked
8 for identification and provisionally admitted
9 after redaction.)

10 THE COURT: 1096 is provisionally admitted, but
11 the actual document will be redacted after testimony of
12 the witness who will itemize the ones that he actually
13 tested.

14 That means that you can't show that one on the
15 screen.

16 MR. SATTERLEY: Yes, Your Honor. We have three
17 additional stipulations with regards to demonstrative
18 evidence. And this is Exhibits 1046, 1047, and 1099.

19 1046 is a NIST standard, and I don't believe
20 there's any objection --

21 For demonstrative purposes only; correct?

22 MR. CALFO: Correct.

23 THE COURT: All right. So 1046 won't be
24 admitted into evidence, but you may show it on the
25 screen.

1 (Whereupon, Plaintiff's Exhibit 1046 was marked
2 for identification.)

3 MR. SATTERLEY: Yes, Your Honor.

4 MR. MULARCZYK: Well, we have an objection to
5 that one specifically for all purposes. I didn't have
6 an objection to the animation that he proposed, but I
7 did have an objection to that for all purposes. It
8 wasn't something that was disclosed in this case, it
9 wasn't something that was referenced as reliance
10 material in his deposition, and so for that reason it
11 shouldn't be permitted in this case.

12 THE COURT: All right. So it's a demonstrative
13 tool.

14 MR. SATTERLEY: Yes, just demonstrative,
15 Your Honor. We're not seeking its admission.

16 THE COURT: All right. What is it?

17 MR. SATTERLEY: It's just -- it's a tremolite.
18 The NIST -- NIST is the National Institute for
19 Standards and Technology, and this shows what tremolite
20 the standard is.

21 THE COURT: Is that the image that you're
22 showing me there that I can see from here?

23 MR. SATTERLEY: Pardon?

24 THE COURT: No, no. I can see it from here.
25 Oh, it's not just one page.

1 MR. SATTERLEY: It is, I think, three pages and
2 it shows what under the microscope the standard of
3 tremolite is, and all Dr. Longo does is says -- gives
4 an opinion that he has -- that he's -- his lab took
5 these photographs.

6 THE COURT: All right. I'll allow it as a
7 demonstrative. I won't allow it into evidence.

8 MR. SATTERLEY: And the heavy liquid separation
9 animation is 1046 is what I showed in opening
10 statement. Counsel advised me they have no objection
11 to it for demonstrative purposes only the animation of
12 the heavy liquid separation, as 1047.

13 THE COURT: All right. That can be shown on
14 the monitor, but it won't be in evidence.

15 MR. SATTERLEY: Yes, Your Honor. And the final
16 is the 1990 advertisement in a magazine called *Asbestos*
17 *Issues*, June of 1990. And this is Exhibit 1099. And
18 it's --

19 No objection for demonstrative purposes?

20 MR. CALFO: No objection for demonstrative
21 purposes.

22 THE COURT: Mr. Mularczyk?

23 MR. SATTERLEY: The 1990 ad.

24 THE COURT: All right. Mr. Mularczyk is
25 shaking his head no.

1 MR. MULARCZYK: No objection, Your Honor, I'm
2 sorry.

3 THE COURT: All right, so that one also can be
4 shown to the jury, but it's not in evidence.

5 (Whereupon, Plaintiff's Exhibit 1047 was marked
6 for identification.)

7 (Whereupon, Plaintiff's Exhibit 1099 was marked
8 for identification.)

9 MR. SATTERLEY: While I'm meeting and
10 conferring with Mr. Calfo, Ms. Clancy has a few issues
11 that she may want to raise.

12 MS. CLANCY: Ms. Steinmann.

13 MS. STEINMANN: I'm sorry, but, Your Honor, we
14 were sent a grouping of exhibits early this morning,
15 and they also just were nice enough to provide me a
16 copy, but I'm still going through them as we've been
17 talking, so I'm not prepared to address these yet.
18 We've just got them this morning, so.

19 MS. CLANCY: These were all documents to which
20 Johnson & Johnson responded to an RFA saying that they
21 kept them in the ordinary course of business, and so at
22 the time they were created, I didn't anticipate there
23 would be, well, actually an objection to them. So if
24 we could just take two minutes to allow Ms. Steinmann
25 to look at the documents.

1 THE COURT: Are you going to be using them with
2 this witness?

3 MS. CLANCY: Yes, Your Honor.

4 THE COURT: All right. Well, let's take a
5 minute and take a look at it. We'll take a short
6 recess.

7 MS. CLANCY: Thank you, Your Honor.

8 MR. MULARCZYK: When this issue is resolved, I
9 don't know if the Court remembers, but we still had a
10 motion in limine on this witness, and -- with the full
11 expectation that this Court is not going to turn around
12 this witness and send him home, I just would ask for a
13 few minutes so we can address it and we just have a
14 ruling on it before we move forward.

15 THE COURT: All right.

16 While Ms. Steinmann is looking at all those
17 documents, we are going to Amotion in limine. It is
18 Motion in Limine -- Joint Motion in Limine Number --
19 I've forgotten the numbers -- like, 7 or 8, or
20 something. It's Number 1 --

21 MR. MULARCZYK: It's 3A.

22 THE COURT: Well -- oh, it's -- oh --

23 MR. MULARCZYK: It's -- it's Colgate's Motion
24 in Limine 3A.

25 THE COURT: Yes, there you go. It was also

1 Whitaker, Clark & Daniels' motion.

2 And by the way, I -- I want to point out to you
3 that on Exhibit 23 to the Scala deposition, where it
4 says "F. Roesch, R-o-e-s-c-h, at the top in what
5 appears to be maybe even my handwriting, that's not my
6 handwriting. And I am no relation to Fred Roesch.

7 MR. GARY SHARP: It is spelled differently.

8 THE COURT: No, it's not.

9 MR. GARY SHARP: I thought it was R-o-a-c-h.
10 Exhibit 23, Your Honor?

11 THE COURT: Yes.

12 MR. SATTERLEY: As I was reading through the
13 document the other day, I was thinking, "I wonder if
14 he's related."

15 THE COURT: All right. I have this motion
16 actually as Motion in Limine Number 2 of
17 Colgate-Palmolive.

18 MR. MULARCZYK: Oh, okay. All right.

19 MS. CLANCY: Isn't that the one he already
20 ruled on, Number 2?

21 MR. MULARCZYK: We never argued this one.

22 MS. CLANCY: We argued one motion in limine for
23 you on Dr. Longo on -- on chain of custody.

24 MR. MULARCZYK: So there was one on samples,
25 and there was on Longo. Two separate motions.

1 MS. CLANCY: Correct.

2 I think -- I think, Your Honor, where -- I'm a
3 little confused, because we argued one on the
4 authenticity of the samples, and then they filed
5 another motion also alleging authenticity of the
6 samples and -- and other of what -- Dr. Longo's
7 opinions. I just want to make sure I'm responding to
8 the correct one, because the Court has already ruled on
9 the one with regard to authenticity of the samples.

10 THE COURT: This is -- it's -- it's this motion
11 right here, this --

12 MS. CLANCY: What is -- what is the --

13 THE COURT: I would say that's nine inches of
14 Colgate --

15 MS. CLANCY: The 9-inch motion? Well,
16 unfortunately, that doesn't differentiate it from other
17 any of Colgate's other motions, so --

18 THE COURT: This is -- this is the biggest one.

19 MS. CLANCY: Oh, the biggest one. What's the
20 title of it?

21 THE COURT: Plaintiffs' -- it is Defendant
22 Colgate-Palmolive Company's Motion in Limine to Exclude
23 Testimony of Plaintiff's Expert Dr. William Longo
24 Regarding Unreliable Testing Performed on Undisclosed,
25 Unauthenticated Containers of Cashmere Bouquet.

1 MS. CLANCY: I think that's the one that the
2 Court has already ruled on, but --

3 THE COURT: My note shows that it's passed.

4 MS. CLANCY: Okay. All right. Well --

5 THE COURT: You may be confusing it with the
6 Egilman motion.

7 MR. MULARCZYK: Your Honor, there was one about
8 the authenticity of the samples themselves.

9 THE COURT: That was --

10 MR. MULARCZYK: It was Joint -- it was Joint
11 Defense, I think, Motion in Limine Number 1, maybe, or
12 Colgate Number 1.

13 THE COURT: All right. Well, go ahead,
14 Mr. Mularczyk.

15 MR. MULARCZYK: All right. So since -- since
16 this motion is fresh in your mind, Your Honor --

17 THE COURT: I must confess that while I read
18 the motion, I didn't look at all the exhibits.

19 MR. MULARCZYK: And I don't blame you.

20 So this is -- this is a really focused motion.
21 Generally speaking, I don't have a concern with
22 Dr. Longo speaking about the testing that he personally
23 did, but where it becomes problematic is when he
24 attempts to extrapolate from his own handful -- subset
25 of testing that he's done to try to say whether or not

1 what the plaintiff used was contaminated and at what
2 levels specifically.

3 There is an opinion that he has specifically
4 within his -- within his declaration and that he
5 offered in his deposition, which is, basically, anybody
6 including Ms. Schmitz, who used Cashmere Bouquet at any
7 time would have been exposed to asbestos and at
8 significant levels or substantial levels.

9 And so, again, I've got no problem with him
10 coming in here and talking about the samples he's
11 tested. It's well within -- well within his realm.

12 But there is nothing that he has done
13 scientifically, whether it's some sort of analysis or
14 calculation, whether it be mathematical or statistical
15 or anything at all, that allows him to make the jump
16 from the small subset of samples that he has tested to
17 the -- to the entire product line or even to the
18 products that Ms. Schmitz used. There's simply nothing
19 there. Nothing at all.

20 And I think it's inappropriate to allow him to
21 do that under *Sargon*. I don't think he's demonstrated
22 that. And so if we're going to keep him to -- if we
23 are going to keep him in his lane and have him talk
24 about his samples that he has looked at personally, no
25 problem. But as soon as he makes that jump to what

1 Ms. Schmitz used and whether that's appropriate, I
2 think it's not, and I don't think it's supported.

3 THE COURT: All right. Does Johnson &
4 Johnson --

5 MR. CALFO: We join.

6 THE COURT: You concur with that?

7 MR. CALFO: Yes, Your Honor.

8 THE COURT: All right.

9 Ms. Clancy.

10 MS. CLANCY: Okay. Yes, Your Honor. So within
11 the nine inches of exhibits that Colgate attached, I'm
12 assuming that they attached Dr. Longo's report in this
13 case, where they stated that there were no scientific
14 calculations, no data, no math whatsoever to support
15 his opinions, and that's absolutely belied by his
16 report.

17 He's testified in his deposition -- and he
18 provided voluminous testing -- that not only has he
19 examined the actual samples of Cashmere Bouquet and
20 Johnson & Johnson --

21 THE COURT: Well, they're -- they're not saying
22 that. They're saying that he's incapable of opining
23 that because he found asbestos in the samples that he
24 looked at of the Colgate-Palmolive product, that --
25 that other bottles may have had asbestos in them, too.

1 MS. CLANCY: Yeah, sure. So he found in the
2 Colgate bottles, 100 percent contained asbestos.

3 THE COURT: 100 percent of the samples, not --

4 MS. CLANCY: Correct.

5 THE COURT: -- 100 percent of the bottles.

6 MS. CLANCY: And he also found -- went through
7 the Colgate historical documents, where Colgate found
8 asbestos in their samples.

9 He's also reviewed the mechanism of testing
10 that Colgate used in order to analyze whether or not it
11 had asbestos, which, as the Court heard yesterday and
12 as we heard from Scala, is the XRD method, which is
13 incapable of being sensitive to asbestos below a
14 certain level. 2 percent to 1 percent is the
15 scientific evidence.

16 And so, therefore, under *Lyons v. Colgate*, the
17 Court of Appeals expressly held that where you have an
18 expert who analyzed the sample at issue, who has
19 looked at the historical document, who has looked at
20 the testing samples, the testing that was used by the
21 corporation, to see that it was wholly deficient to
22 find whether there was asbestos there in the first
23 instance, that it is absolutely permissible for that
24 expert to say whether or not when the plaintiff
25 breathed -- that the plaintiff would have had

1 substantial exposure to asbestos by use of the product.

2 And that *Colgate v. Lyons* decision was
3 expressly found, especially in a situation where the
4 plaintiff had a lifetime use or it was for decades of
5 use of a product, that for the expert to say that it
6 would have been a substantial exposure upon use of the
7 product was permissible testimony.

8 Anything with respect to, "Well, you can't say,
9 because you didn't test her actual bottle that she
10 used," or "You can't say that literally every bottle
11 had asbestos in it because you couldn't test every
12 single bottle," that goes, the Court held -- went to
13 the weight and not the admissibility of that opinion.

14 The -- Dr. Longo in his report set forth the
15 careful calculations, where he analyzed each of
16 Ms. Schmitz' personal use exposures from each of the
17 products, calculating the number of grams in the
18 products, the amount of ounces used in her lifetime,
19 and the -- the resultant exposure that would have
20 ensued as a result of her use of the products.

21 This is square on with what the Court of
22 Appeals has held is admissible based on, actually,
23 Defendant Colgate's same objections in that case.

24 THE COURT: Mr. Mularczyk.

25 MR. MULARCZYK: So I guess I'll have to live

1 with the Lyons decision forever, but that was a summary
2 judgment case, okay, has no applicability to the issue
3 that we're raising here.

4 Let's make sure we understand what his
5 expertise is. He's a material scientist. He's an
6 analyst. He tests the products that are before him, or
7 his lab tests the products that they're looking at.
8 He's -- he's not an individual that has anything in his
9 background that allows him to make this statistical
10 leap about what Ms. Schmitz may have used and how often
11 and so forth.

12 He, himself, testified at his deposition that
13 the reason he gets from his subset of 58 samples to
14 what Ms. Schmitz used was because he took the number of
15 positives, divided it by the total number of samples he
16 tested, and says, "Well, that's the percentage. I'm
17 going to be a little bit conservative, because there's
18 some nondetects" -- and he tested some samples where he
19 found nothing, by the way -- and then he says, "I'm
20 going to take that percentage and apply it to the
21 universe of products."

22 That's -- that's not expertise, Your Honor. I
23 could do that for anything.

24 THE COURT: Well, you can -- it goes to the
25 weight, though. It goes not to admissibility.

1 The motion is denied.

2 All right. Are we ready to proceed?

3 MS. CLANCY: I just was going to find out
4 which --

5 THE COURT: Still on the record.

6 Ms. Steinmann is going to give us the word as
7 soon as she's ready.

8 Ms. Steinmann, how much more time do you need?

9 MS. STEINMANN: I -- I think I'm ready.

10 THE COURT: All right. I don't want to press
11 you. If you need a few more minutes, that would be
12 fine.

13 MS. STEINMANN: I'm done.

14 THE COURT: All right.

15 MS. CLANCY: Can I just look at which ones
16 you've --

17 MS. STEINMANN: Yes.

18 MS. CLANCY: May I meet and confer with her for
19 one minute, Your Honor?

20 THE COURT: Yes.

21 MS. CLANCY: Thank you.

22 (Counsel conferring at counsel table out of the
23 hearing of the reporter.)

24 MS. CLANCY: Your Honor, we have a stack of
25 agreed. If I could read into the record and then we

1 have a very small stack of disagreed.

2 THE COURT: All right.

3 MS. CLANCY: Agreed exhibits which plaintiffs
4 offer into evidence are Plaintiff's 640, 158, 155, 171,
5 174, 430, 660, 713, 752, and 172.

6 THE COURT: Ms. Steinmann, do you stipulate
7 those documents into evidence?

8 MS. STEINMANN: Yes, Your Honor.

9 THE COURT: Mr. Sharp? Mr. Mularczyk?

10 MR. MULARCZYK: Just subject to the same
11 objection regarding the applicability -- well, hearsay
12 as to Colgate and then the instruction that we
13 requested.

14 THE COURT: All right. Well, the hearsay as to
15 Colgate, which one? I mean, you know.

16 MR. MULARCZYK: My understanding is these are
17 all Johnson & Johnson documents, so all of them as
18 against Colgate.

19 THE COURT: Oh, all right. Well, it's just the
20 issue about that the jury can't take evidence of
21 malfeasance by Johnson & Johnson and attribute it to
22 Colgate?

23 MR. MULARCZYK: Correct.

24 THE COURT: Okay. You will get an instruction
25 on that. You'll just have to continue working it out.

1 MR. CALFO: Your Honor, we're both getting an
2 instruction; right?

3 THE COURT: Oh, yeah, yeah, yeah. It goes both
4 ways. It actually will be one -- it's all in one
5 instruction more likely than not.

6 All right. All of those exhibits are in
7 evidence. I'll read them for the record:

8 640, 158, 155, 171, 174, 430, 660, 713, 752,
9 and 172.

10 (Whereupon, Plaintiff's Exhibit 640 was
11 received into evidence.)

12 (Whereupon, Plaintiff's Exhibit 158 was
13 received into evidence.)

14 (Whereupon, Plaintiff's Exhibit 155 was
15 received into evidence.)

16 (Whereupon, Plaintiff's Exhibit 171 was
17 received into evidence.)

18 (Whereupon, Plaintiff's Exhibit 174 was
19 received into evidence.)

20 (Whereupon, Plaintiff's Exhibit 430 was
21 received into evidence.)

22 (Whereupon, Plaintiff's Exhibit 660 was
23 received into evidence.)

24 (Whereupon, Plaintiff's Exhibit 713 was
25 received into evidence.)

1 (Whereupon, Plaintiff's Exhibit 752 was
2 received into evidence.)

3 (Whereupon, Plaintiff's Exhibit 172 was
4 received into evidence.)

5 What documents are you offering that you do not
6 have agreement on?

7 MS. CLANCY: Sure. Should I -- there's just a
8 few, so should I take them one at a time -- and I want
9 to give an overarching change so there's one thing on
10 the table. For each of these, we're offering Johnson &
11 Johnson has responded to request for admission, in this
12 case stating that they -- the true and correct copy of
13 these -- these are true and correct copies and that
14 they were maintained in the ordinary course of business
15 of Johnson & Johnson.

16 THE COURT: So it's an admission that they're
17 business records?

18 MR. SATTERLEY: That's correct.

19 MS. CLANCY: So the -- then we'll get -- they
20 have objections on top of that.

21 So the first one is Document 724.

22 MR. SATTERLEY: I can address 724, Your Honor.
23 Their objection, I understand, is that this document
24 relates to industrial talc instead of cosmetic.

25 THE COURT: What is it?

1 MR. SATTERLEY: It's a McCrone letter to them
2 talking about the presence of amphiboles and asbestos,
3 fibers of asbestos in talc, in Vermont -- in the
4 Vermont mines where they were making baby powder with
5 this talc.

6 And they say this relates to industrial talc,
7 not cosmetic talc. But the testimony of Dr. Hopkins,
8 who the jury will hear, Your Honor has already ruled,
9 he says, and the other documents show, HC, the word
10 "HC" stands for Hammondsville cosmetic, and "HC" are --
11 is on the sample number on here quite a bit.
12 Your Honor has already overruled the general motion in
13 limine with regards to industrial talc or any reference
14 to industrial talc.

15 This, I think, falls squarely within that.
16 But, more importantly, it's going to be for the jury to
17 assess whether or not it's cosmetic talc like we claim
18 and like Dr. Hopkins admits through the documents that
19 HC stands for Hammondsville cosmetic or whether it's
20 industrial talc which that's their argument.

21 THE COURT: All right.

22 MS. STEINMANN: Your Honor, with respect to
23 that document, yes, we do dispute that HC, and
24 Dr. Hopkins also disputes it, that it is cosmetic talc.
25 He says it can be designated for industrial talc

1 including a specific document that says roofing
2 materials.

3 So we believe that that particular document
4 under 352 and relevance is not relevant to this case
5 and is also misleading and also requires us to have a
6 little minitrial of what HC actually means and what it
7 doesn't mean.

8 THE COURT: All right. I'll admit the document
9 into evidence. The objection is overruled.

10 Next one?

11 MS. CLANCY: That was 724.

12 THE COURT: 724 will be in evidence.

13 (Whereupon, Plaintiff's Exhibit 724 was
14 received into evidence.)

15 MS. CLANCY: The next one is 719.

16 MR. SATTERLEY: 719 is a letter from McCrone
17 once again to Windsor Minerals and it's signed by
18 Thomas Kremer and James Millette, and it's related to
19 1986. It's identification of chrysotile asbestos in
20 talc. We believe this is relevant to demonstrate that
21 chrysotile asbestos was actually found in the talc
22 samples. And there's been a lot of discussion about
23 McCrone and Dr. Millette, and there will be further
24 discussion about Thomas Kremer. And so we believe this
25 is relevant and important for the jury to understand

1 the identification of chrysotile as found in these
2 samples.

3 MS. STEINMANN: Your Honor, our response to
4 this is -- and I believe there's no dispute; there may
5 be, but -- this is specifically dealing with a mine in
6 California that cosmetic talc was never ever mined out
7 of, not for J&J or for any other company.

8 THE COURT: I think this was the Windsor mines?

9 MR. SATTERLEY: Windsor Minerals is not
10 California. Windsor Minerals is Vermont. It's Windsor
11 Minerals.

12 MS. STEINMANN: These testing results, as
13 Dr. Hopkins explains, are from a California western
14 mine.

15 THE COURT: Did Windsor mines have mines
16 outside of Vermont?

17 MS. STEINMANN: Johnson & Johnson only got
18 their talc from Vermont. I can't speak for Windsor
19 mines.

20 THE COURT: Okay. Well, you got to persuade me
21 that Windsor doesn't refer to the mines called Windsor
22 mines in Vermont before I can even really seriously
23 consider your objection.

24 MS. STEINMANN: Nowhere in here does it say
25 Windsor mines. It says "WMI," which is a designation

1 as Hopkins explains, which stands for this western mine
2 in California.

3 MR. SATTERLEY: Well, Hopkins, Your Honor, has
4 no basis whatsoever to explain away the document. The
5 document says Windsor Minerals. There's no Windsor
6 Mineral California talc mines that I've ever heard of.
7 So if that's their argument, that's an argument they
8 can make to the jury that that's not relating to this,
9 but there's certainly no documents to support that
10 argument.

11 THE COURT: All right. It seems that the
12 parties have different visions of what it actually
13 stands for. We'll let the jury decide it. 719 will be
14 in evidence.

15 (Whereupon, Plaintiff's Exhibit 719 was
16 received into evidence.)

17 MR. SATTERLEY: The next document is 726,
18 Your Honor. This is 2004 testing of Johnson & Johnson
19 Baby Powder by Forensic Analytical.

20 This was received by Johnson & Johnson at the
21 time. Forensic Analytical in Hayward, California
22 tested off-the-shelf baby powder, found asbestos in it,
23 anthophyllite asbestos. It was immediately -- this
24 report was transferred.

25 THE COURT: What's the objection?

1 MS. STEINMANN: Your Honor, this was testing
2 done by a new station. It was not done by the request
3 or at the request of Johnson & Johnson, and we believe
4 it has hearsay and is irrelevant.

5 THE COURT: Well, it's not a business record?

6 MS. STEINMANN: It is -- it was in our files.
7 It was sent to us.

8 MR. SATTERLEY: Your Honor, at the very least,
9 this goes to notice. We're going to hear who Mark
10 Floyd is today.

11 THE COURT: It only goes to notice. 726 will
12 be in evidence.

13 (Whereupon, Plaintiff's Exhibit 726 was
14 received into evidence.)

15 MR. SATTERLEY: Your Honor, Exhibit 163 is a
16 1971 document regarding their meeting with Dr. Langer
17 concerning analytical analysis of talc, and this shows
18 that -- this gives them knowledge that with regard to
19 fibrous minerals in 1971 were identified. It goes to
20 the fibrous content. It goes to asbestos, their
21 knowledge of asbestos in the product. In this 1971
22 document in their files it says Johnson's product he
23 estimated 5 percent, and the other 25 percent of the
24 particles to be fibrotic, some of which could be
25 asbestos.

1 I believe their objection is that it relates to
2 ovarian tissue, but at no point in this document do
3 they talk about ovarian cancer. They just talk about
4 the findings of talc and asbestos in ovarian tissue.

5 MS. CLANCY: Uterine tissue.

6 MR. SATTERLEY: Uterine tissue.

7 THE COURT: Ms. Steinmann.

8 MS. STEINMANN: Your Honor, a couple of things.
9 The document itself actually says "uterine tissue" on
10 the very first page. And this is, again, dealing with
11 the Tenovus study, which was solely directed at
12 studying uterine tissue for the development of ovarian
13 cancer and whether it was or was not caused by talcum
14 powder. That was the subject of an MIL, and we believe
15 that this document is irrelevant and misleading under
16 352.

17 THE COURT: Can I see the document?

18 MR. SATTERLEY: Yes, Your Honor. While I'm
19 handing the document to the Court, while Your Honor did
20 say ovarian cancer should not be discussed, this
21 document never talks about ovarian cancer.

22 THE COURT: Just let me read it. 163 will be
23 in evidence.

24 (Whereupon, Plaintiff's Exhibit 163 was
25 received into evidence.)

1 MR. SATTERLEY: The final -- the final
2 document --

3 MS. STEINMANN: Your Honor, if I could, if it
4 is coming into evidence, could we just ask -- ask that
5 the word "uterus" be redacted.

6 THE COURT: Oh, I don't think that that's so
7 prejudicial.

8 MR. SATTERLEY: And the final document,
9 Your Honor, relates to documents already been displayed
10 to the jury in the cross-examination of Alice Blount.
11 This is a 1998 letter from Alice Blount to the attorney
12 for Johnson & Johnson. It was authenticated by
13 Dr. Blount, and --

14 THE COURT: What number is it?

15 MR. SATTERLEY: This is Exhibit 160, and this
16 is April 23, 1998, where she identifies the --

17 THE COURT: I remember.

18 MR. SATTERLEY: -- sample.

19 THE COURT: I remember the testimony.

20 What's the objection to that?

21 MS. STEINMANN: Your Honor, foundation and
22 hearsay.

23 THE COURT: Oh, she looked at the letter and
24 said, I sent this to their lawyer. That will be
25 admitted into evidence. That's Number 160.

1 (Whereupon, Plaintiff's Exhibit 160 was
2 received into evidence.)

3 MS. STEINMANN: Your Honor, I also just want to
4 make sure, I believe that that had been sent with the
5 Blount records, so I want to make sure that there's not
6 duplicate copies being submitted. I didn't have a
7 chance to cross-reference --

8 MR. SATTERLEY: We won't put two copies of the
9 same things in evidence. We still have to address the
10 Blount documents later.

11 With that, Your Honor, we're prepared for the
12 jury to come in.

13 THE COURT: All right. Is there anything you
14 would like to raise, Mr. Calfo?

15 MR. CALFO: Nothing, Your Honor.

16 THE COURT: Nobody else is standing up. Let's
17 bring the jury in.

18 (Whereupon, the jury having entered the
19 courtroom, the following proceedings were held:)

20 THE COURT: Good morning, ladies and gentlemen.

21 THE JURY: Good morning.

22 THE COURT: Sorry to keep you waiting so long.
23 The record should reflect that all the jurors are in
24 their appropriate seats, counsel are present, and we're
25 ready to proceed.

1 We are not going back to the video. You're
2 going to see a witness this morning.

3 Would you please call your next witness,
4 Mr. Satterley.

5 MR. SATTERLEY: Yes. Good morning, Your Honor.
6 Good morning, ladies and gentlemen.

7 Dr. William Longo.

8 WILLIAM LONGO, Ph.D. (for the Plaintiff)

9 sworn as a witness,

10 testified as follows:

11 THE CLERK: Thank you, sir. Please take a
12 seat.

13 Could you please state your full name and spell
14 it for the record.

15 THE WITNESS: William Edward Longo, L-o-n-g-o.

16 THE COURT: Mr. Satterley, you may inquire on
17 direct examination.

18 MR. SATTERLEY: Thank you.

19 DIRECT EXAMINATION BY MR. SATTERLEY:

20 Q. Good morning, Dr. Longo.

21 A. Good morning.

22 Q. Have we requested you to come talk with the
23 folks here in Alameda County regarding your testing of
24 various talc products for the presence of asbestos?

25 A. Yes, sir, you did.

1 Q. And have we -- have you brought with you
2 photographic evidence of the testing and testing
3 results of what you found?

4 A. Yes, I did.

5 Q. Have I also asked you to analyze the case of
6 Patricia Schmitz with regards to her exposures, the
7 types of exposures she would have, to asbestos from
8 cosmetic talc products?

9 A. Yes. That's correct.

10 Q. Before we get to your specific opinions in this
11 case, let's talk a little bit about you and yourself.

12 Tell us, where did you go to college, college
13 forward as far as your education.

14 A. I went to the University of Florida. I
15 received a bachelor's of science in microbiology. I
16 went on to graduate school in material science and
17 engineering. I received a master's of science in
18 material science and engineering, and finished up in
19 1983 with a Ph.D. in material science and engineering.
20 All at the University of Florida.

21 Q. So when I call you "doctor," you're not a
22 medical doctor?

23 A. No, sir, I'm not.

24 Q. Tell us about material science. What is that?

25 A. It's an engineering field that literally is the

1 study of materials, and you can break these materials
2 down to approximately five groups.

3 Plastics or polymers, ceramics or minerals like
4 asbestos, metals, or metallurgy. And then composites
5 where you may have a polymer that has a metal content
6 of it where they mix two different things.

7 And then an area I spent a lot of time in, in
8 graduate school is biomaterials, things that are
9 implanted into the body like an artificial knee or a
10 hip replacement or an interocular lens if you have
11 cataract surgery.

12 And as a material scientist, we are taught and
13 learn all the properties of these different materials:
14 strength, weaknesses, ability to withstand corrosion or
15 not, and what are the right materials to use for any
16 particular type of engineering project. For example --
17 and I use this example a lot. If you're building a new
18 bridge, the new Bay Bridge that went up, a material
19 scientist would have been involved in that. And he
20 would be the go-between the civil engineer and the
21 mechanical engineer and the engineer who designed that
22 bridge.

23 What is the best concrete? What are the new
24 types of metal alloys that could be used that are
25 stronger, cheaper, better corrosion resistance. So a

1 material scientist would have been involved in most of
2 those aspects.

3 All your major semiconductor advances over the
4 years has been due to material scientists. I don't
5 know about now, but the CEO of Intel was a material
6 scientist at one point in the past.

7 So we understand where the products and
8 materials should be used, what kind of temperature --
9 strengths, temperature, resistance, et cetera. And
10 also as a material scientist, we -- they develop new
11 materials. Again, the semiconductor advances, the
12 ceramics on the -- that were developed for the space
13 shuttle, the -- even as simple as the changeover, if
14 your result is me, from the metal soda can to the
15 aluminum soda can. That was a material scientist who
16 came up with that particular aluminum/copper alloy,
17 mixture of two metals, to be able to make that into a
18 one-step process.

19 The last thing material that scientists do a
20 lot about is almost forensic engineering: What went
21 wrong? Is there a contaminant here? Why did this
22 break? What's in these ingredients that shouldn't be
23 in these ingredients? Say, a manufacturer is making
24 injection molding of these polyethylene plastic cups
25 and all of a sudden in the field they're not holding up

1 and they're leaking.

2 The material scientist could probably go in and
3 figure out where in that engineering molding process,
4 is it the right materials, is it the right polymer.
5 And that's what I do at my lab a lot, is the forensic
6 engineering side of things.

7 Q. So let me talk about your lab. You currently
8 have a lab of how many employees?

9 A. We have a lab in Suwanee, Georgia, and
10 currently I think we're up to about 46 employees.

11 Q. And what are the type of professionals work
12 with you in your lab, what type of scientists?

13 A. I have other material scientists like myself.
14 We have physicists. We have inorganic chemists;
15 organic chemists; microbiologists; industrial
16 hygienists; geologists; mineralogists; mechanical
17 engineering; physicists -- I think I may have said
18 that. I think that covers it. Oh, and electron
19 microscopist specialist; polarized light microscopist
20 specialist; and, of course, the support staff, the
21 admin people that really run the company.

22 Q. And with regards to asbestos, how long have
23 you -- have you been involved in the analysis for the
24 presence of asbestos?

25 A. Yes, sir, I have.

1 Q. For how long?

2 A. A little bit over 30 years.

3 Q. And with regards to asbestos issues, have you
4 made presentations or publications involving asbestos
5 or asbestos exposure?

6 A. I have.

7 Q. Have you tested many different products for the
8 presence of asbestos over the course of your career?

9 A. Yes, sir. Early years myself and also our lab.

10 Q. And approximately how many products or
11 specimens have you examined, you and your laboratory
12 examined, to determine whether asbestos is present or
13 not?

14 A. A large number of different types of products,
15 but just pure numbers of samples, our laboratory is
16 approaching close to 400,000 individual analysis of
17 samples, different samples for asbestos.

18 Q. And some of the testing and testing results
19 have you published in the peer-reviewed literature?

20 A. We have.

21 Q. And have you made presentations regarding your
22 findings of asbestos in some of the samples?

23 A. Yes, sir, we have.

24 Q. And with regards to your professional
25 organizations, what are some of the associations,

1 organizations you belong to?

2 A. The American Industrial Hygiene Association,
3 the Materials Research Society, the Microscopist
4 Society, the American -- I've said that already.
5 American Industrial Hygiene, the American Society of
6 Testing Materials, the Ceramics Society, Materials and
7 Methods Group. There's a number of them. Adjunct
8 member of the American Conference of Governmental
9 Industrial Hygienists. I'm not an American
10 Industrial -- a Governmental Industrial Hygienist, but
11 you can be an adjunct on to that. And also I am a
12 board certified forensic engineer.

13 Q. Now, with regards to industrial hygiene, you
14 said you're not a member of -- you're not a member of
15 the American Conference of Government Industrial
16 Hygienists?

17 A. No. I'm not a full member. You have to have
18 worked for the government to be an -- as an industrial
19 hygienist, but you can be an adjunct member so you can
20 get the information.

21 Q. Have you reviewed and studied the scientific
22 literature on industrial hygiene about asbestos over
23 the course of your career?

24 A. Yes, I have.

25 Q. And in developing your expertise as a forensic

1 engineer and material scientist, have you studied
2 exposures to asbestos that occur -- that individuals
3 have occurred historically?

4 A. I have.

5 Q. And have you reviewed those scientific
6 literature in that regard?

7 A. Yes, sir, I have.

8 Q. Do you, Dr. Longo, have specialized knowledge,
9 skill, and experience regarding exposures to asbestos
10 that folks have had based upon your review of the
11 scientific literature?

12 A. Yes, sir.

13 Q. Now, have you -- well, let me ask you about
14 your laboratory. Is your laboratory certified by any
15 organization?

16 A. It is.

17 Q. And what organization has certified your
18 laboratory?

19 A. We're certified by the American -- the American
20 Industrial Hygiene Association for analyzing asbestos
21 air samples. As well as asbestos bulk samples. We're
22 certified by the National Voluntary Laboratory
23 Accreditation Program for the analysis of asbestos by
24 transmission electron microscopy as well as bulk
25 samples by polarized light microscopy.

1 We're an International Standards Organization
2 certified for quality control, QC, as well as some
3 specialized testing, including water analysis for
4 asbestos. And we're also certified by ISO to
5 certify other laboratories that they follow a
6 particular type of analysis or protocol. And we're --
7 also we have -- we're registered laboratory for the --
8 for the FDA. So that we can analyze all types of
9 pharmaceutical-type materials from Schedule 2 on down.

10 We are certified by the DEA to handle those
11 types of products that come into the laboratory.
12 Again, Schedule 2 on down.

13 I guess that covers it, other than individual
14 certifications from groups that come in so that they
15 feel comfortable that when we do work or analysis for
16 them.

17 Q. What type of organizations have you consulted
18 with over the course of your career with regards to
19 testing materials including asbestos?

20 A. The FAA. We have consulted for the General
21 Services Administration, the Environmental Protection
22 Agency. NATO in Germany, when the Berlin Wall came
23 down, we were asked to analyze to see if that wall had
24 asbestos in it.

25 We have -- we have consulted for the Department

1 of Defense; for the U.S. Treasury; for National
2 Institutes of Health; for the CDC, Center for Disease
3 Control; and a number of companies outside this kind of
4 environment where we do problem-solving for them as
5 well as just regular analysis.

6 Q. Now, you're consulting at my request, me and
7 Ms. Clancy's request, in this case.

8 Have you done this in the past where you've
9 testified in cases involving injury and litigation?

10 A. Yes, I have.

11 Q. And have you testified at the request of
12 plaintiffs as well as the request of defendants in
13 litigation?

14 A. I have.

15 Q. I want to ask you about the ASTM D22. What is
16 that?

17 A. The American Society of Testing Materials is a
18 nonprofit organization, where most anybody can join,
19 and it is the largest group out there that develops
20 standards or testing for almost anything. There's
21 40- -- almost 40,000 members now.

22 And the D22 committee, is what I'm a member of
23 produces methods -- testing methods which, essentially,
24 is just a recipe, go from A to Z, so that labs can
25 standardize particular tests for analysis of different

1 types of matrices -- water, dust, et cetera -- for
2 asbestos.

3 Q. And how long have you been a part of the D22
4 committee or subcommittee?

5 A. Since approximately 1989 or so.

6 Q. And did you have any role in leading that
7 committee in the past or being part of leadership of
8 that committee?

9 A. Not leadership in the committee, but I was
10 tasked to being the shepherd or the person to push
11 through and write the test method for analyzing dust
12 for asbestos, building dust. The -- and I spent six
13 years doing that.

14 Q. Now, with regards to the tools that you use as
15 a material scientist for the identification of
16 asbestos, the jury has already heard last week from Lee
17 Poye about the transmission electron microscope. You
18 utilize that tool?

19 A. We do.

20 Q. How many TEMs do you have?

21 A. Currently, we have four.

22 Q. And how long have you had specialized
23 knowledge, skill, and experience in utilizing the
24 transmission electron microscope?

25 A. Over 30 years.

1 Q. The jury has heard about the scanning electron
2 microscope. Do you have a scanning electron
3 microscope?

4 A. We do.

5 Q. And how long have you utilized the scanning
6 electron microscope in your laboratory?

7 A. Over 30 years.

8 Q. The jury has heard about polarized light
9 microscopes. Do you have polarized light microscopes
10 in your lab?

11 A. We do.

12 Q. How many?

13 A. I think around 10.

14 Q. And how long has your laboratory utilized
15 polarized light microscopes historically?

16 A. Over 30 years.

17 Q. Will you -- do you have specialized knowledge
18 and experience in explaining what is seen under these
19 microscopes and what's identified and how they're
20 characterized? Will you be able to do that -- do that
21 today?

22 A. Yes, sir, I believe so.

23 Q. With -- specifically with regard to industrial
24 hygiene, you mentioned that you're a member of the
25 American Industrial Hygiene Association.

1 How much literature have you looked at with
2 regard to asbestos in terms of exposures over the
3 course of your career?

4 A. I think the number of published papers I've
5 reviewed has to be in the hundreds.

6 Q. And with regards to your analysis of exposures,
7 do you review and consider historical company
8 documents?

9 A. Yes, sir, I do.

10 Q. And specifically in this case, have you
11 reviewed and looked at some of the Johnson & Johnson
12 historical documents regarding asbestos issues?

13 A. Yes, I have.

14 Q. And have you specifically looked at some of the
15 Colgate documents regarding asbestos issues?

16 A. Yes, sir.

17 Q. And in some of these historical documents --
18 and we'll talk about them a little bit later -- are
19 there technical-type terms mentioned in some of them
20 that you can help explain some of these terms?

21 A. Yes, sir, I believe so.

22 Q. The jury's probably heard of some of them, but
23 we -- we may go through some -- some more of those.

24 I asked you about your organizations, and I
25 just want to make sure -- I don't know -- the National

1 Asbestos Council, were you a member of that
2 organization?

3 A. Yes, sir, I am.

4 Q. The Environmental Information Association, are
5 you a member of that organization?

6 A. Yes, sir, I am.

7 Q. The Electron --

8 A. The National Asbestos Council, that morphed
9 into the Environmental Information Association. So
10 that's really one group.

11 Q. Okay. I see.

12 And then the Electron Microscopy Society
13 association, are you member of that organization?

14 A. Yes, sir. Yes, sir.

15 Q. The Microbeam Analysis Society, are you a
16 member of that organization?

17 A. That, too.

18 Q. Are you a member -- have you been a member of
19 the New York Academy of Science?

20 A. I have been a member in the past.

21 Q. Have you been a member of the National
22 Institute of Building Sciences?

23 A. Yes, sir. I still am.

24 Q. Have you been a member of the Society for
25 Ultrastructural Pathology?

1 A. Yes, sir, I have been.

2 Q. And in the past, have some of the publications
3 that you've published and been the co-author been on
4 asbestos issues with pathologists?

5 A. Yes.

6 Q. Okay. Does your laboratory -- in addition to
7 looking at products, has your laboratory looked at
8 tissue, human tissue, for asbestos, the presence of
9 asbestos?

10 A. We have.

11 Q. The American College of Forensic Examiners, are
12 you a member of that organization?

13 A. Yes, sir. That's actually the one I'm board
14 certified in and now have been made -- been elected to
15 be a diplomat in that organization.

16 Q. And have you -- specifically with regard to
17 talc and exposures from talc, have you studied the
18 scientific literature from an exposure perspective to
19 form the basis of your opinions here today?

20 A. Yes.

21 MR. SATTERLEY: Your Honor, at this time, I
22 would offer Dr. Longo as an expert in material science,
23 asbestos testing, and exposure.

24 THE COURT: Mr. Calfo, do you wish to inquire
25 of this witness on his qualifications?

1 MR. CALFO: Your Honor, we'll reserve our
2 questioning for later.

3 THE COURT: Mr. Mularczyk?

4 MR. MULARCZYK: No questioning at this time,
5 Your Honor.

6 THE COURT: All right.

7 Ladies and gentlemen, this witness will be
8 certified as an expert in material science, forensic
9 engineering, testing for asbestos, and exposure to
10 asbestos.

11 During this trial, you will hear testimony from
12 expert witnesses. The law allows an expert to state
13 opinions about matters in his or her field of expertise
14 even if he or she does not witness any of the events
15 involved in the trial.

16 You do not have to accept an expert's opinion.
17 As with any other witness it is up to you to decide
18 whether you believe the expert's testimony and choose
19 to use it as a basis for your decision. You may
20 believe all, part, or none of an expert's testimony.

21 In deciding whether to believe an expert's
22 testimony, you should consider the expert's training
23 and experience, the facts that the expert relied on,
24 the reasons for the expert's opinion.

25 The law allows expert witnesses to be asked

1 questions that are based on assumed facts. These are
2 sometimes called hypothetical questions.

3 In determining the weight to give to the
4 expert's opinion that is based on assumed facts, you
5 should consider whether the assumed facts are true.

6 If expert witnesses disagree with one another,
7 you should weigh each opinion against the others. You
8 should examine the reasons given for each opinion and
9 the facts or other matters that each witness relied
10 upon. You may also compare the experts'
11 qualifications.

12 With that in mind, Mr. Satterley, you may
13 inquire on direct examination.

14 MR. SATTERLEY: Thank you, Your Honor.

15 BY MR. SATTERLEY:

16 Q. Dr. Longo, I'll jump to the -- your opinions
17 first. Then we are going to backtrack and go through a
18 lot of the bases for your opinions.

19 Do you have an opinion, Dr. Longo, based upon
20 everything you've looked at -- internal company
21 documents, historical documents, the scientific
22 literature, all the testing that you've done -- whether
23 or not Johnson & Johnson Baby Powder historically has
24 included asbestos as a part of it?

25 A. I do have an opinion.

1 Q. And what is your opinion?

2 A. That it does.

3 Q. Do you have an opinion, Dr. Longo, based upon
4 historical review of company documents, your review of
5 the scientific literature, your own -- your
6 laboratory's own testing of Cashmere Bouquet product,
7 whether the Cashmere Bouquet historically has included
8 asbestos as a part of it?

9 MR. MULARCZYK: Objection. Foundation.

10 THE COURT: It's overruled.

11 THE WITNESS: Yes, I do have an opinion.

12 BY MR. SATTERLEY:

13 Q. And what is your opinion?

14 A. That that product does.

15 Q. And with regards to this case, did you evaluate
16 Ms. Schmitz' exposure to those products, both Johnson &
17 Johnson Baby Powder and Cashmere Bouquet?

18 A. Yes, I did.

19 Q. And have you reviewed testimony of her and her
20 sisters that was given under oath with the attorneys
21 for these companies?

22 A. Yes.

23 Q. And have you developed an opinion or formed an
24 opinion with regards to her exposures to asbestos from
25 these products?

1 A. Yes, I did.

2 Q. And what is your opinion?

3 A. That she was exposed to asbestos from the use
4 of these two manufacturers' products.

5 Q. And did you issue a signed report with your
6 calculations regarding the exposures she had?

7 A. I did.

8 Q. And in your opinion, based upon her many years
9 of use of these products and being around the products
10 when her family members were using them, do you have an
11 opinion whether those exposures was a substantial
12 exposure to asbestos from their products?

13 MR. MULARCZYK: Objection. Foundation.

14 THE COURT: Sustained.

15 BY MR. SATTERLEY:

16 Q. We'll go through the math in a little bit.

17 With regards to Johnson & Johnson -- let's
18 start with Johnson & Johnson -- have you reviewed
19 historical documents with regards to their testing,
20 testing done by laboratories at their request?

21 A. Yes.

22 Q. And with regards to Colgate-Palmolive, have you
23 reviewed testing by laboratories of the Cashmere
24 Bouquet product for the presence of asbestos?

25 A. Yes.

1 Q. And based upon your review of the historical
2 documents, do you have an opinion whether it was
3 documented back in the 19- -- with regards to Johnson &
4 Johnson first, back in the 1960s and the 1970s,
5 asbestos being present?

6 MR. CALFO: Objection, Your Honor. No
7 foundation for this witness.

8 MR. MULARCZYK: And hearsay, Your Honor.

9 THE COURT: Overruled on both.

10 THE WITNESS: Yes, I do have an opinion.
11 BY MR. SATTERLEY:

12 Q. And with -- and with --

13 A. That it is -- that it does.

14 Q. What is your opinion?

15 A. The opinion is that it does.

16 Q. Okay. And we'll go through some of the
17 documents here in a little bit.

18 With regards to Colgate-Palmolive, once again,
19 did you look at the historical documents in the 1970s,
20 '80s, and '90s regarding the Cashmere Bouquet product?

21 A. Yes, sir.

22 Q. And based upon your review of the historical
23 documents of the Cashmere Bouquet product, was it
24 documented in the '70s, '80s, '90s and forth -- so
25 forth, the presence of asbestos?

1 MR. MULARCZYK: Same objections, Your Honor.

2 THE COURT: It's overruled.

3 THE WITNESS: Yes, it was.

4 BY MR. SATTERLEY:

5 Q. First of all, I want to -- I want to ask you a
6 question -- a few questions. Counsel --

7 Oh, there it is. That's what I was looking for
8 right there.

9 Counsel for Johnson & Johnson told the folks on
10 the jury that you personally have made \$30 million
11 working for plaintiffs' lawyers.

12 Is that true?

13 MR. CALFO: Objection, Your Honor. Misstates
14 opening statement. I said the company did.

15 MR. SATTERLEY: I disagree.

16 THE COURT: It's overruled. The jury will --

17 THE WITNESS: No, I have not made \$30 million
18 working for plaintiffs' attorneys personally.

19 BY MR. SATTERLEY:

20 Q. You and your company, the company you work for,
21 MAS, that's --

22 You're the president of the company; correct?

23 A. Yes, I am.

24 Q. Okay. Is it -- it is true, though, over the
25 course of 30-some-odd years you've charged for your

1 time in litigation to both plaintiffs -- plaintiffs and
2 defendants in these forensic situations?

3 A. Yes, I have.

4 Q. And would it be fair to say, over 30-some-odd
5 years, you have charged -- your company has charged
6 both for your time and all the other folks working --
7 involved in forensic issues, litigation issues, well
8 over \$30 million?

9 A. My time; other individuals that have testified;
10 all the testing we did over the years, especially in
11 the property damage litigation, where we did forensic
12 engineering to identify the products, that would be
13 fair. That's what our company has billed over
14 30 years.

15 Q. With regards to advertising, a Johnson &
16 Johnson lawyer told the folks on the jury that you
17 started advertising for plaintiffs' lawyers -- to get
18 plaintiffs' cases 30-some-odd years ago.

19 Is that true?

20 A. That is not true.

21 Q. We've marked for identification purposes
22 Exhibit 1099. And if I could --

23 It's okay.

24 Let's see. Is the projector on?

25 May I approach, Your Honor?

1 THE COURT: You may.

2 BY MR. SATTERLEY:

3 Q. I'm handing you, Dr. Longo, Exhibit 1095. I
4 shared it with counsel previously, another copy,
5 courtesy copy --

6 THE COURT: Is it 1095 or 1099?

7 MR. SATTERLEY: 1099, Your Honor.

8 -- another courtesy copy.

9 BY MR. SATTERLEY:

10 Q. Is this a journal called *Asbestos Issues*, dated
11 June 1990?

12 A. It is.

13 Q. And by this point in time --

14 If I can figure out how to... there we go.

15 By this point in time, 1990, were you
16 already -- did you already have specialized skill on
17 utilizing the transmission electron microscope?

18 A. Yes, sir.

19 Q. And did you already consider yourself to be an
20 expert on utilizing the transmission electron
21 microscope?

22 A. Yes. I had spent a lot of time, especially in
23 graduate school, as well as in my career at that point,
24 dealing with interpreting, analyzing samples on the
25 transmission electron microscope.

1 Q. It says in this 1990, "Asbestos management
2 strategies for new era building owners."

3 Did your company place an ad in this -- in this
4 journal?

5 A. We did.

6 Q. And did this journal relate to building issues?

7 A. Yes, sir.

8 Q. All right. And is this the advertisement that
9 was placed in this journal in 1990?

10 A. It was.

11 Q. Does this in any way relate to you trying to
12 get business from mesothelioma victims so you can
13 testify in a courtroom like this?

14 A. No, not at all.

15 Q. If somebody were to say this ad right here
16 proves that you were trying to be an expert for people
17 suffering from asbestos disease, would that be
18 accurate?

19 A. No, sir.

20 Q. The person in the ad with -- this is you over
21 here on the right; correct?

22 A. Yes. I've hardly aged at all.

23 Q. Okay.

24 A. Yes, that's me.

25 Q. Okay. And this fellow on the left, who's that?

1 A. That's Mr. George Yamate.

2 Q. Who is George Yamate?

3 A. George Yamate is the author of the TEM
4 protocol -- and you may hear something about it --
5 typically called the Level 1, Level 2, Level 3
6 analysis. There was a draft method issued in the early
7 1980s or so for the EPA, and it's still a widely used
8 protocol, especially Level 2, in our industry. And
9 George Yamate was the author of that.

10 Q. I want to show you this part right here.
11 It's -- it's hard to read. I've got it blown up here.
12 I showed it to counsel.

13 First of all, it says on here, "final clearance
14 lab," "the final clearance lab." What does "the final
15 clearance" mean?

16 A. Final clearance in this industry is that when
17 there is an abatement of removing asbestos, especially
18 in schools, there's a requirement that they do a final
19 air clearance, which means that once the contractor
20 says, "Yes, we're all done. We got all the asbestos
21 out. Everything is clean. There's no asbestos dust
22 left in this area that we did this in containment" --
23 final air clearance would involve going in and taking
24 air samples while the consultant uses a leaf blower at
25 a hundred miles an hour to disturb any dust that may be

1 laying anywhere to see if there's asbestos present
2 before you let the kids back in the school.

3 That's final air clearance, and it's sort of a
4 term now of art that everybody uses. "Yes, we've got
5 some final air clearance samples coming," we know
6 exactly what that is. And that's what we were
7 advertising for.

8 Q. This paragraph here, it says, "Professional
9 asbestos consultants and contractors know that when the
10 job demands the best final air clearance testing by
11 TEM, you go to the people whose rigorous in-house
12 quality control measures produce TEM results and
13 professional support that stands up to the toughest
14 tests you may face."

15 That was included; correct?

16 A. Yes, sir.

17 Q. And you -- had you and Mr. Yamate in a
18 courtroom somewhere in Georgia; right?

19 A. Yes, it was. It was in rural Georgia, and we
20 took this ad in the courtroom to say that "If you use
21 our laboratory and somebody challenges your final air
22 clearance, saying, 'Oh, it's not really clean,' or 'You
23 should have did this,' we would come in and defend our
24 data. We would" -- "If it goes to court, we would be
25 working for you, saying, 'No, this is what the' --

1 'This is the analysis we did, and it's correct.'"

2 That's what that ad was about.

3 Q. And the folks that would be hiring you for this
4 would be building owners or contractors, people doing
5 asbestos abatement?

6 A. Yes, sir.

7 Q. Okay. This had absolutely nothing to do with
8 talc issues?

9 A. No.

10 Q. Had nothing to do with mesothelioma victims?

11 A. No.

12 Q. Had nothing to do with plaintiff lawyers or
13 anything like that?

14 A. No, sir.

15 Q. Now I want to switch gears and talk about
16 testing and testing methods. Tell us about the
17 strengths of utilizing transmission electron microscope
18 for the identification of asbestos.

19 A. Its strengths are that it's the most sensitive
20 method out there in that it can detect single asbestos
21 fibers and fully characterize them in that if you see a
22 single small fiber, you can get the chemistry of it,
23 utilizing EDXA, or the energy dispersive x-ray. So you
24 can do microchemistry.

25 You can get crystalline structure information

1 by doing the diffraction patterns. I know Mr. Poye
2 probably went through all that when he was here,
3 diffraction patterns.

4 And it allows you to take photographs of these
5 micro- -- these -- these microscopic fibers.

6 And so if you have something there, you can
7 fully characterize it. So it still is the most
8 sensitive method for this type of analysis.

9 Q. I want to show you what's already in evidence,
10 Exhibit 326. This is 1974, January 3rd.

11 MR. SATTERLEY: May I approach, Your Honor?

12 THE COURT: You may.

13 BY MR. SATTERLEY:

14 Q. January 3, 1974, on Johnson & Johnson
15 letterhead. And you've seen this in the past and
16 considered this; correct?

17 A. I have.

18 Q. And this is from A.J. Goudie to Dr. Gaughran
19 and Dr. Shelley, "Purchase of a transmission electron
20 microscope plus attachments."

21 Do you see that?

22 A. I do.

23 Q. And Dr. Goudie says, "Over the past three
24 years, there seems to have been general agreement that
25 transmission electron microscope is the only absolute

1 proof with electron diffraction for the identification
2 of asbestos in talc."

3 Do you agree with the statement that was said
4 in 1974?

5 A. Yes and no. I would agree, in 1974, that was
6 the absolute best instrument to use, but only for the
7 positive identification.

8 The "no" part is, it's not -- if you don't see
9 asbestos by TEM using that at the time, it doesn't mean
10 that there's no asbestos present. It just means you
11 didn't detect it.

12 So, yes, it is the most -- at that time, it was
13 the best method to use for absolute identification.

14 THE COURT: Mr. Satterley, if you're moving on
15 to something else, would you please identify the
16 document that you have on the screen by the exhibit
17 number.

18 MR. SATTERLEY: I apologize, Your Honor. I
19 thought I did. 326.

20 THE COURT: All right.

21 MR. SATTERLEY: I apologize.

22 The next document that's already into evidence,
23 Exhibit 238. And may I approach again, Your Honor?

24 THE COURT: You may.

25 BY MR. SATTERLEY:

1 Q. This is March 1974, a confidential Johnson &
2 Johnson memorandum.

3 MR. SATTERLEY: I provided a copy to counsel.
4 Another copy.

5 BY MR. SATTERLEY:

6 Q. And flip over to the second page, page 2.

7 To put this into context, on the first page,
8 does it say it's -- it's to the Windsor Minerals,
9 Windsor, Vermont, from R.C. Reynolds, Dartmouth
10 College?

11 Do you see that on the first page?

12 A. Yes, sir, I do.

13 Q. And this -- "Subject: Analysis of talc
14 products and ores for asbestiform amphiboles"?

15 A. Yes, sir.

16 Q. And on the second page, it says, where I've
17 highlighted here on Exhibit 238, "For the reasons
18 described above, a concentration technique is
19 mandatory" --

20 MR. SATTERLEY: I apologize, Your Honor.
21 Mrs. Schmitz.

22 -- "for the reasons described above, a
23 concentration technique is mandatory because it brings
24 the amphiboles into a reasonable concentration range
25 for optical or other methods of analysis.

1 "Such a method has been developed, and it" --
2 "it is described in this report."

3 Have you considered this document in your
4 analysis of what's known as the concentration method?

5 A. I have.

6 Q. And based upon this document and many other
7 documents, was the concentration method a method that
8 was discussed within Johnson & Johnson way back in the
9 1970s?

10 A. Yes, sir, it was. Early '70s.

11 Q. And I would like to show you another document
12 that you -- I believe you considered.

13 This is Exhibit 329. It's already into
14 evidence. This is dated June 3, 1973, on Johnson &
15 Johnson letterhead.

16 And do you see it's signed off by
17 Dr. D.R. Petterson?

18 A. I can't see who it's signed off by on --

19 Q. The name at the bottom -- oh, I'm sorry.

20 MR. SATTERLEY: May I approach, Your Honor, and
21 hand the witness -- I apologize.

22 THE WITNESS: I believe you're correct, but I
23 just wanted to check.

24 BY MR. SATTERLEY:

25 Q. Thanks for helping me out there. All right.

1 You see now, Doctor, that -- D.R. Petterson's
2 name at the bottom?

3 A. I do.

4 Q. And it's carbon-copied to W. Ashton?

5 A. Yes, sir.

6 Q. And have you considered many documents from
7 Bill Ashton, or William Ashton, historically with
8 regard to Johnson & Johnson?

9 A. Yes, sir.

10 Q. And it says in -- it says in the third
11 paragraph -- it says, "Note the use of the
12 concentration technique is the drafted specification
13 for the analysis of asbestos.

14 "Also, I have discussed with Shelley that the
15 samples to be sent by Dr. Rolle will be on 20 recent
16 samples of powder in which we found no
17 tremolite/actinolite by optical technique."

18 I want to stop right there and ask you to
19 explain the optical technique and why you would analyze
20 using a concentration technique if there are no
21 tremolite or actinolite identified.

22 A. The optical technique is using polarized light
23 microscopy, and that is a very good technique as long
24 as the amount of asbestos in there is high enough for
25 it to detect.

1 Every analytical method has an analytical
2 sensitivity/detection limit, where the analyte -- and
3 we all call it analytes -- the asbestos is at a
4 concentration still in there but lower than the optical
5 microscope can detect. You say it's nondetect.

6 So in order to increase the ability to detect
7 it or get a better analytical sensitivity, you go to
8 the concentration method, which is -- literally, you're
9 looking for needles in a haystack. That might take you
10 a long time. You may miss them.

11 If you get rid of the hay and just look for the
12 needles, because the needles are all now concentrated,
13 you can come back and say, "Yes, there are all these
14 needles in the haystack. I just couldn't see them
15 before because there was so much hay, I had to weed
16 through."

17 And that's what the concentration does.

18 Q. Is the concentration method a preparation
19 method that's done before you put it onto the filter
20 before it goes into the microscope itself?

21 A. Yes, sir. That's a good point.

22 These techniques -- polarized light microscopy,
23 XRD, x-ray diffraction, and especially transmission
24 electron microscopy -- it's all about the sample
25 preparation and how good a job you do and how you

1 concentrate it, how you put it together before it goes
2 into what we call tools.

3 Because the analytical transmission electron
4 microscope is just going to give you the same
5 information that it would give you no matter what.
6 It's all about sample preparation.

7 So you prepare the sample in a way that gives
8 the best opportunity to see if you can detect the
9 asbestos at the lower -- the best analytical
10 sensitivity you can. That's all done before you get to
11 the electron microscope.

12 All these techniques, it's all about sample
13 preparation.

14 Q. And with regards to the presence of platy talc,
15 if you prepare a sample where it has lots of platy talc
16 on it, will that -- does that potentially obstruct the
17 analyst's ability to see the asbestos materials?

18 A. Yes. You're covering it up, especially in the
19 transmission electron microscope, or the TEM --
20 everybody calls it TEM.

21 If I have an asbestos fiber here and I have a
22 platy talc on top of it -- we're imaging by using an
23 electron beam, which goes real good for resolution, but
24 it only has so much strength. So it can't go through
25 stuff that builds up.

1 So if here's my asbestos fiber and I have a
2 platy talc here, I go, "Okay. Well, I can see it."
3 But if I start getting more and more platy talc on here
4 because it's so concentrated with it, pretty soon, it's
5 like that. You can't find it, no matter how much you
6 look for it, TEM, if you have too many talc particles
7 in there.

8 Good analogy is that I have a big bowl of
9 spaghetti, and there's a couple of meatballs in there,
10 and I'm just looking at the bowl, and I can't see them.
11 But if I take it and spread it out or I get rid of the
12 spaghetti, the meatballs stand right out.

13 And -- and that's with both polarized light
14 microscope and especially with TEM. If you have too
15 much talc in there, you can't see the asbestos fibers.

16 So what they used to do -- or still -- people
17 still do it -- is, they dilute the sample to spread all
18 that talc out so that you can find the asbestos fibers.
19 But if you dilute the talc particles, you're diluting
20 the asbestos fibers, too. So now I'm spreading it out
21 and making it harder and harder to find something if
22 it's present.

23 If I use the concentration method, I get the
24 talc out of there, and I can concentrate the asbestos
25 down, better opportunity to see if it's really

1 positive, detectable or not.

2 Q. This 1974 Johnson & Johnson document says,
3 "Shelley reports that Pooley" -- you know who
4 Dr. Pooley is?

5 A. Yes, sir, I do.

6 Q. -- "that Pooley has found actinolite in our
7 Vermont talc by his concentration technique. Italian
8 talc by the same technique appears to be free of
9 amphiboles. I have sent the report referred to
10 I.W. Sloan on to Roger Miller for their study."

11 Do you see that?

12 A. Yes, sir.

13 Q. Is this one example in 1973 of the use of the
14 concentration method by analysts finding asbestos that
15 they otherwise would not find by optical microscope?

16 A. That is correct.

17 Q. One other exhibit and then I want to talk -- I
18 want to show the animation on the heavy liquid
19 separation.

20 This is Exhibit 330.

21 MR. SATTERLEY: May I approach, Your Honor?

22 THE COURT: Yes, you may.

23 MR. SATTERLEY: It's already into evidence.

24 BY MR. SATTERLEY:

25 Q. This is November 26, 1974, on Johnson & Johnson

1 letterhead. And it, Dr. Longo, is signed by a --
2 signature on the second page, John P. Schelz --
3 S-c-h-e-l-z.

4 Do you see that?

5 A. Yes, sir, I do.

6 Q. Is this a document you considered in
7 formulating your opinions in analyzing this case?

8 A. Yes.

9 Q. And it says, "It's a review of experimental
10 techniques for the concentration of asbestos minerals
11 in talc, Project Number 0503-00."

12 Do you see that?

13 A. I do.

14 Q. It says, "Our preliminary investigation of
15 experimental technique for the concentration of
16 asbestos minerals in talc has been in two areas:" And
17 then they have a whole section on -- at the top.

18 Do you see that?

19 A. I do.

20 Q. And Dr. Fred Pooley is referenced there.

21 A. Yes, sir, he is.

22 Q. And I want to focus on the second.

23 It says, "The concentration of
24 actinolite/tremolite" -- by the way, actinolite and
25 tremolite, is that a form of asbestos?

1 A. It is.

2 Q. And we'll show photographs.

3 Have you seen actinolite/tremolite asbestos
4 under your microscopes?

5 A. We have.

6 Q. And have you taken photographs of them and
7 demonstrated for the presence of talc?

8 A. Yes, sir.

9 Q. It says, "The concentration of actinolite,
10 tremolite, and chrysotile from talc by individual heavy
11 liquid separation technique developed by Dr. Robert
12 Reynolds, Dartmouth College. Dr. Reynolds of the
13 Department of Earth Science has been requested by
14 Mr. V. Zeitz" --

15 You know Vernon Zeitz? You know that name?

16 A. I've have see it on documents.

17 Q. -- "of Windsor Materials (sic) to work on the
18 actinolite concentration technique. This method
19 utilizes the difference in densities between actinolite
20 and other amphiboles and talc to effect separation in a
21 heavy liquid medium."

22 Do you see that?

23 A. I do.

24 Q. Is that what's sometimes referred to as the
25 heavy liquid separation?

1 A. It is.

2 Q. So when we talk concentration and we talk heavy
3 liquid separation, are we basically talking about the
4 same process?

5 A. It is the same process, but you can concentrate
6 by other methods for other things, like if you're --
7 it's calcium carbonate and -- you can dissolve out the
8 calcium carbonate with a slight acid solution. That's
9 not what we're dealing with here. They're all
10 concentration methods, but this one uses liquid that is
11 heavier density than, say, water, to cause things to
12 sink versus causing things to float.

13 Amphibole asbestos will sink, the talc will
14 float because of their different densities.

15 Q. It says, "Following Dr. Reynold's procedure, we
16 have been able to detect tremolite by optical
17 microscopy dispersion staining in the separated
18 fraction from a sample containing initially as little
19 as 0.01 percent by weight tremolite in Vermont talc."

20 And I want -- and I want to ask you: The
21 separation process, can be utilized by both the TEM and
22 by a regular microscope?

23 A. Yes, sir.

24 Q. Okay. And can -- can the separation method
25 be -- once it's separated and prepped out, can it be

1 looked under what's called a "PLM," a polarized light
2 microscope?

3 A. Yes, it can.

4 Q. Now I want to switch gears and talk about the
5 animation. And this is Exhibit 1047 for demonstrative
6 purposes only.

7 Have you in the past, Dr. Longo -- well, did
8 you actually assist in the preparation of this
9 animation?

10 A. I did.

11 Q. And you told me and my graphics people how
12 to -- how the heavy liquid separation process occurred?

13 A. Yes.

14 Q. And let me --

15 Does this heavy liquid separation animation
16 truly -- accurately demonstrate the process of heavy
17 liquid separation?

18 A. It does.

19 Q. And as we see this animation perceived through,
20 if you can talk us through what -- what's happening?

21 A. Here's the centrifuge tube. You have talc in
22 the bottom. And then you're putting a heavy liquid
23 density material in there so that you can separate the
24 talc from any potential amphiboles that might be
25 present. So you shake it up and get the talc

1 distributed through there and put it in a centrifuge
2 where you're spinning it anywhere from 7,000 to
3 9,000 rpm. After you're done, you'll have a talc plug
4 at the top, since it floats, and most of your
5 amphibole -- potential amphibole asbestos minerals will
6 come to the bottom of the centrifuge tube.

7 Once that happens, you can remove the tip. We
8 use a technique by flash freezing the centrifuge tube
9 in liquid nitrogen and using sort of a guillotine-type
10 apparatus to just cut the tip off, and then put that in
11 solution, filter it, and then analyze it.

12 We normally use 30 milligrams of talc when we
13 do this. And we can put the entire amount of the
14 collected material on a TEM filter.

15 If you use 30 milligrams of talc and filtered
16 that on to a TEM filter without doing this, the sample
17 would be black. It would be so thick the electron
18 beams can't go through the sample. You would never be
19 able to do that.

20 So this increases the sensitivity almost
21 10,000 times for the finding of potential amphibole
22 asbestos.

23 Q. Have you utilized, you and your laboratory,
24 utilized the heavy liquid separation technique with
25 regards to samples of Johnson & Johnson, historical

1 samples provided by Johnson & Johnson, for preparation
2 in this case?

3 A. Yes, I have.

4 Q. Have you, you and your laboratory, analyzed
5 Cashmere Bouquet utilizing the heavy liquid separation
6 for the identification of asbestos?

7 A. Yes, we have.

8 Q. And have you issued reports and photographs and
9 documented asbestos after utilizing the heavy liquid
10 separation?

11 A. Yes.

12 Q. Have you and your laboratory utilizing heavy
13 liquid separation preparation and utilize that under a
14 transmission electron microscope?

15 A. Yes, we have.

16 Q. Have you utilized the heavy liquid separation
17 for -- have you utilized the heavy liquid separation
18 specifically regarding Cashmere Bouquet under a
19 polarized light microscope?

20 A. Yes.

21 Q. And will -- a little bit later will you be able
22 to demonstrate the photographs and what's represented
23 in the photographs?

24 A. Yes.

25 Q. Using the heavy liquid separation, the

1 concentration method, did you and your laboratory find
2 asbestos in the Colgate Cashmere Bouquet products that
3 you tested?

4 A. Yes, we did.

5 Q. And did you -- did I specifically send -- ask
6 you to have someone from your lab go to the RJ Lee
7 Group to pick up Cashmere Bouquet samples?

8 A. Yes.

9 Q. And one of your analysts named Zach, did he go
10 up to Pittsburgh, or around Pittsburgh, to get the
11 Cashmere Bouquet samples with the -- that was with the
12 RJ Lee Group?

13 A. Yes, he did.

14 Q. And do you -- did you guys have a chain of
15 custody and document what was -- what was a part of
16 that Cashmere Bouquet product?

17 A. Yes, sir.

18 Q. We'll talk about that in a little bit.

19 Oh, did you find -- did you analyze 20 samples
20 from the samples you received?

21 A. Yes.

22 Q. And of the 20 samples of Cashmere Bouquet,
23 historic Cashmere Bouquet, that you analyzed in your
24 laboratory, how many of them had asbestos in them?

25 A. All of them.

1 Q. All 20?

2 A. Yes, sir.

3 Q. This next exhibit that's in evidence, 251.

4 MR. SATTERLEY: May I approach, Your Honor?

5 THE COURT: You may.

6 BY MR. SATTERLEY:

7 Q. This is dated November 24, 1976. This is by
8 Mr. Ashton to Mr. Lee. Once again, it's Exhibit 251.

9 Is this a document you've considered in
10 analyzing this case?

11 A. Yes, I have.

12 Q. And it's signed off by Mr. Ashton, and it's
13 copied to Dr. Semple and Dr. Petterson on Johnson &
14 Johnson letterhead there.

15 And it says -- in 1976 to Mr. George Lee,
16 "Attached is a copy of a disturbing proposal request
17 which the FDA has currently made available to qualified
18 bidders. The scope of the work is the separation of
19 asbestos in foods, drugs, and talc for identification
20 and determination. I find this proposal more
21 disturbing than other proposals up to now because it
22 aims at separation and isolation of asbestos from a
23 wide scope of products and animal tissues. Up to now,
24 our main problems have had to do with the
25 identification, whereas, now it looks like the FDA is

1 getting into the separation and isolation methodology
2 which will mean concentration procedures. As I have
3 pointed out many times, there are many talcs on all
4 markets which will be hard-pressed in supporting purity
5 claims when ultra-sophisticated assay separation and
6 isolation techniques are applied. Chances are that the
7 FDA proposal will open up the" -- "open up new problem
8 areas with asbestos and talc minerals."

9 Is that the process by which you utilize on the
10 talcs that you analyzed that we're going to talk about
11 later?

12 A. Yes, it is.

13 Q. Does that isolation and separation of asbestos
14 from talc allow you to see under the microscope the
15 asbestos that was present?

16 A. Yes, it did.

17 Q. And have you also, Dr. Longo, had talc samples
18 analyzed by other techniques like XRD or optical
19 microscope analysis where no asbestos was present but
20 then you looked at it by TEM and asbestos would be
21 present?

22 A. Correct. The XRD would be nondetectable.
23 Regular PLM nondetectable in some cases. Some cases
24 you do find it by regular PLM. Where the TEM or the --
25 using heavy concentration method or PLM heavy

1 concentration method had the highest percentage of
2 positives where the other techniques on the same sample
3 were negative.

4 Q. Based upon your analysis of all -- all aspects
5 of this case, did the FDA ever adopt or require the
6 isolation and separation method and require folks to
7 utilize this to find asbestos in talc?

8 A. No. They never -- they never finalized that.

9 Q. The next document, before our mid-morning
10 break, Exhibit 234.

11 MR. SATTERLEY: May I approach, Your Honor?

12 THE COURT: You may.

13 MR. SATTERLEY: It's already into evidence.
14 Provide a copy to counsel. This is entitled,
15 Exhibit 234, "Proposed Specs for Analyzing Talcs for
16 Asbestos."

17 And the first page is dated May 16, 1973. And
18 this is on Johnson & Johnson letterhead; correct?

19 A. It is.

20 Q. And just to put it into context, this is signed
21 off by Tom Shelley and carbon-copied to a number of
22 other people, including Dr. Fuller, Dr. Goudie,
23 Dr. Nashed, and Dr. Petterson; correct?

24 A. That is correct.

25 Q. And he says, with regards to the third

1 paragraph, "England is considering method of
2 preconcentrating the asbestos so as to be able to
3 analyze by x-ray. They find no asbestos by doing this
4 with Italian talc. They find, Pooley, 0.05 percent of
5 a tremolite type in Vermont."

6 Is that a document you considered in coming to
7 your opinions in this case?

8 A. It is.

9 Q. And did you find asbestos in Vermont talcs?

10 MR. CALFO: Objection. There's no foundation
11 for that from this document, Your Honor.

12 MR. SATTERLEY: I'm asking a separate question.

13 THE COURT: He asked whether he found it.

14 THE WITNESS: We have.

15 BY MR. SATTERLEY:

16 Q. If we flip over to page 2, under the Pooley
17 method, talking about the -- the preconcentration of
18 asbestos followed by x-ray diffraction analysis.

19 Now, this -- they called this the "Pooley
20 method" here. It says, "This technique has not been
21 written up yet, but evidently when applied to Vermont
22 talc, 0.05 percent of tremolite talc is found. The
23 limitation of this method is that it may be too
24 sensitive."

25 Do you see that?

1 A. I do.

2 Q. And from a material standpoint -- from a
3 material science standpoint, do you find that the
4 analytical -- the heavy liquid separation is too
5 sensitive?

6 A. No. Saying something is too sensitive in the
7 analytical world makes no sense. You're always
8 striving to get better and better detection limits to
9 be able to fully characterize. That's how all progress
10 is made through the years in analytical equipment:
11 making it better, more sensitive so you can get the
12 information. Now, what you do with that information
13 may or may not use it, but -- it's just something that
14 is foreign to our -- to me that you would say some
15 analytical method is too sensitive.

16 MR. SATTERLEY: Your Honor, it may be a good
17 time for the mid-morning break.

18 THE COURT: What time is it? It's 10:30.

19 MR. SATTERLEY: Is that okay?

20 THE COURT: Sure. We will take our mid-morning
21 break. Come back in 15 minutes.

22 Please remember the admonition that it is your
23 duty as jurors not to converse amongst yourselves or
24 with anyone else on any subject connected with the
25 trial or to form or express any opinion thereon until

1 the matter is submitted to you.

2 Enjoy your break.

3 (Whereupon, the jury having exited the
4 courtroom, the following proceedings were held:)

5 THE COURT: The record will reflect the jurors
6 have departed the courtroom.

7 Is there anything we need to put on the record?

8 MR. SATTERLEY: Nothing from the plaintiff,
9 Your Honor.

10 MR. CALFO: No, Your Honor.

11 THE COURT: Enjoy your break.

12 MR. MULARCZYK: Thank you, Your Honor.

13 (Recess taken.)

14 (Whereupon, the following proceedings were held
15 outside the presence of the jury:)

16 MR. SATTERLEY: We want -- we'd like to put
17 Your Honor on notice that we've agreed that I've met
18 and conferred with counsel that I'm going to use two
19 scales as demonstratives under the Elmo, if I can
20 figure out how to do this, just for -- to -- for the
21 detection limit, not right this second but later this
22 morning. It's a demonstrate testify to show the
23 limitations of detection. And counsel, I've shared
24 this with counsel and both counsel agrees.

25 THE COURT: All right.

1 Ms. Hill, please bring the jury in.

2 What was the last number?

3 THE WITNESS: Your Honor, I think it's 0234.

4 MS. CLANCY: Thank you.

5 (Whereupon, the jury having entered the
6 courtroom, the following proceedings were held:)

7 THE COURT: The record will reflect that all
8 the jurors are in their appointed seats, counsel are
9 present, and William Longo is in the witness box.

10 Please recall that you're still under oath.

11 THE WITNESS: Yes, Your Honor.

12 THE COURT: You may continue with your direct
13 examination of this witness.

14 MR. SATTERLEY: Thank you, Your Honor.

15 BY MR. SATTERLEY:

16 Q. Dr. Longo, we're going to continue to just talk
17 on one more document on -- regarding asbestos and talc.
18 This is Exhibit 350.

19 MR. SATTERLEY: May I approach again,
20 Your Honor?

21 THE COURT: You may.

22 BY MR. SATTERLEY:

23 Q. And this is from the same Tom Shelley we saw
24 earlier. March the 30th, 1973.

25 And is this a document you've considered in

1 evaluating the issue -- issues in this case?

2 A. Yes, sir.

3 Q. And this is carbon-copied to a large number of
4 folks, including many of the folks we talked about
5 earlier: Petterson, Nashed, Hildick-Smith, Rolle,
6 Goudie, Fuller, and Dr. -- or Mr. Dean in England;
7 correct?

8 A. That is correct.

9 Q. And it relates to asbestos talc -- or talc
10 asbestos patents. And Dr. Pooley. It says, "Harold,
11 we will want to carefully consider the Pooley patents
12 re asbestos in talc. It's quite possible that we may
13 wish to keep the whole thing confidential rather than
14 allow it to be published in patent form and thus let
15 the whole world know."

16 Do you see that?

17 A. I do.

18 Q. Have you ever seen any patents developed by
19 Johnson & Johnson or any of the scientists at Johnson &
20 Johnson regarding the concentration technique, heavy
21 liquid separation, to identify asbestos in talc?

22 A. No. None exists that I can tell.

23 Q. Now, you've reviewed, you said earlier,
24 historical testing of baby powder and talcum powder for
25 the presence of asbestos going back into the 1970s and

3 Q. And have you also -- or do you understand that
4 the Shower -- the Shower to Shower product -- you
5 looked at some of the -- Lee Poye's analysis of Shower
6 to Shower; correct?

8 Q. And, based upon all the materials you reviewed,
9 do you understand that the Vermont talc was the source
10 of Shower to Shower for many years, including in the
11 1970s?

13 Q. And is it important to look at the Shower to
14 Shower product and the analysis of Shower to Shower in
15 understanding whether or not asbestos was present in
16 Vermont talcs?

18 Q. Now, the concentration method, the heavy liquid
19 separation method, is there a limitation with regards
20 to the ability to see chrysotile with that method?

22 Q. And what is that limitation?

23 A. The limitation is the density of chrysotile
24 asbestos is very close to the density of talc.

25 Talc is approximately -- you have 2.7 to

1 2.6 grams per cubic centimeter. Like a sugar cube, how
2 much that weighs, how many grams will fit in a sugar
3 cube.

4 And chrysotile is about 2.5, 2.4.

5 So you would not expect to see chrysotile using
6 the method as written. It will float up to the top
7 with the talc. Also, anthophyllite asbestos has a
8 density close to talc. If it doesn't have any iron.
9 If it has iron, the density increases and you will --
10 if it's present in the amount necessary, you'll find it
11 by the heavy liquid density separation. So those are
12 the two drawbacks currently for the heavy liquid
13 density separation.

14 Q. Well, those drawbacks that you can't find
15 chrysotile -- the drawback that you can't find
16 chrysotile asbestos with the heavy liquid separation,
17 in your opinion, Dr. Longo, is that a reason why you
18 should never ever, ever, ever use it?

19 A. No. That would be silly. You can find
20 tremolite, actinolite, all the tremolite asbestos solid
21 solution series. The majority of what you find in
22 anthophyllite has iron in it. So -- and, of course,
23 the solid solution series with the other asbestiform
24 minerals that can form when anthophyllites form. So,
25 no. You're -- yeah, it's simple. Why throw the baby

1 out with the bath water when you can get so much
2 information using that?

3 Q. Historically going back into the 1970s, was
4 Shower to Shower examined for -- and chrysotile
5 asbestos been documented in that product?

6 A. It has.

7 Q. And I'd like to show you what's already
8 admitted into evidence.

9 MR. SATTERLEY: Your Honor. May I approach
10 again?

11 THE COURT: You may.

12 BY MR. SATTERLEY:

13 Q. This is Exhibit 0278, the University of
14 Minnesota Space Science Center.

15 Have you considered this, Dr. Longo, in your
16 analysis of whether or not there's asbestos in Vermont
17 talcs?

18 A. Yes.

19 Q. And does -- was this the analysis of Shower to
20 Shower product back in 19' -- in the early 1970s for
21 the identification of asbestos?

22 A. Yes, sir, it was.

23 Q. If you can flip over to page 4. And do they
24 describe -- and just so that we --

25 Let me zoom out. Zoom out.

1 The University of Minnesota Space Science
2 Center. Page 4.

3 Do they utilize the electron microscope to
4 identify chrysotile asbestos?

5 A. Yes, sir, they do.

6 Q. And do they indicate that they were taking
7 photographs -- well, first of all, they did a
8 diffraction pattern and they take photographs of the
9 chrysotile asbestos they located in the Shower to
10 Shower product?

11 A. That is correct.

12 Q. And if we flip over to the Figure 17A and 18A.
13 They take a picture of -- it says "S to S grid." And
14 they got a grid number there?

15 A. Correct.

16 Q. And is that -- is that a photograph of a
17 chrysotile asbestos fiber in the Shower to Shower
18 product in the early 1970s by Dr. Hutchinson?

19 A. Yes, sir. That's actually a chrysotile bundle
20 and that's sitting on a foam -- formed -- foam bar grid
21 covering. And that's -- that would be classic
22 asbestos.

23 Q. And over here on the next page, two pages
24 later, page 25 of this exhibit, Figure 18A, once again,
25 Shower to Shower.

1 Does this demonstrate the chrysotile asbestos
2 in the Shower to Shower product?

3 A. Yes and no.

4 Q. Well, tell me yes and no.

5 A. Yes, it has the morphology and this is what you
6 would expect. But they also, if you go to the previous
7 page, they have their diffraction patterns associated
8 with this. And you can't hardly see it there, but it
9 has some classic streaking on it. That's a little
10 small.

11 But they did two things. It has to have the
12 right morphology tubular structure and then the
13 diffraction pattern showing the right crystalline
14 structure.

15 Q. If we flip to the next page. This one is the
16 one you said "yes and no" to. What about the next page
17 here, Figure 18B, what does this demonstrate?

18 A. Again, it demonstrates bundles of chrysotile
19 asbestos along with the other information, so you have
20 chrysotile here.

21 Q. And does this assist in your opinion -- or does
22 this add to your opinion, I should say, that there is
23 historically asbestos documented in Vermont talc?

24 A. Yes, sir.

25 Q. The next document already into evidence is

1 Exhibit 6 -- 679.

2 MR. SATTERLEY: And request permission to
3 approach, Your Honor?

4 THE COURT: You may.

5 BY MR. SATTERLEY:

6 Q. And this is October 27, 1972. An examination
7 of Johnson & Johnson Baby Powder sent to Dr. Goudie.
8 Exhibit 679.

9 And have you seen and considered this
10 examination by McCrone from 1972, Dr. Longo?

11 A. Yes, sir, I did.

12 Q. And did McCrone -- McCrone laboratory identify
13 asbestos in this examination in 1972?

14 A. They did.

15 Q. By the way, let me talk about McCrone for a few
16 minutes.

17 Walter McCrone, did you know who he was?

18 A. Yes, sir. Everybody does in the microscopy
19 field.

20 Q. Was he recognized as someone that was very --
21 very good at the PLM, the polarized light microscope?

22 A. He was a polarized light microscope expert.

23 Q. As far as his involvement with the transmission
24 electron microscope, was Walter McCrone known to be a
25 TEM person?

1 A. Well, he understood it, but he didn't routinely
2 do transmission electron microscopy. His area and the
3 McCrone Atlas that every PLM lab has was polarized
4 light microscopy of all types of minerals. I mean, he
5 was the one who looked at the Shroud of Turin. He's
6 that good of an optical microscopist.

7 Q. With regards to McCrone laboratory, have you
8 previously in the past stated that McCrone laboratory
9 is an outstanding laboratory?

10 A. Yes, sir, I have.

11 Q. And have you said that they're one of the
12 leaders in the world, McCrone is one of the leaders in
13 the world, in the microscope world?

14 A. Yes, sir. I've worked for some of the same
15 clients that they had done analysis for back in the
16 '70s and '80s where I was defending them and saying,
17 they used McCrone. They used a very good lab to tell
18 them that there was asbestos or not in a product.
19 There was a little -- it was a fertilizer company. So
20 I have stated that a number of times.

21 Q. And was -- when you stated that a number of
22 times, and gave those opinions about McCrone, was that
23 prior to your analysis of all these internal documents
24 you've looked at in talc litigation?

25 A. Yes, sir. It was before that where I was able

1 to get documents from McCrone to start looking at the
2 type of analysis they were doing, and some of the
3 things they were doing -- and you have to understand.
4 Walter McCrone very rarely -- after about 1960 very
5 rarely was in the laboratory. He was running the
6 McCrone Research Center, a nonprofit that did teaching,
7 et cetera. It was others that were actually in charge
8 of McCrone after about 1960 or so. Every now and then
9 he would, but very rarely.

10 Q. And do you have -- have you formed opinions and
11 criticisms of some of the analysts of -- from Walter
12 McCrone that you've seen from looking at some of these
13 McCrone reports involving talc?

14 A. Yes, sir, I have criticized them.

15 Q. And what opinions have you formed?

16 A. Things like, you know, willingness to change
17 little things -- change on reports, saying things like
18 they've never found asbestos in all the talc samples
19 they ever used. That was a letter sent out to a trade
20 organization, even though they had data that showed
21 asbestos, internal data, for their talcum powder or
22 baby powder companies they were working for.

23 So, you know, it changed my opinion a little
24 bit of them. They're still great scientists there, but
25 it sort of -- you know, it sort of was, oh, okay.

1 Q. So, is it fair to say you got analyzed, analyst
2 by analyst, with regards to what they've done
3 historically?

4 A. Not only that, you have to look at what methods
5 they were using. Are they using the best method
6 available? Is the results consistent -- do the results
7 make sense or can they make these statements, like this
8 talc sample -- this talcum powder sample or cosmetic
9 talc sample was negative and therefore it's free of
10 asbestos?

11 Nobody can ever say that. No analytical
12 technique can ever say it's free of anything. All's
13 you can say is, it's down to our detection limit, it's
14 below our detection limit, and it may or may not be
15 there.

16 Making broad statements like there's nothing
17 in -- we didn't find anything so it's asbestos-free or
18 it's -- anything. Like water. Well, we analyzed this
19 water using the EPA method, there's no lead, it's
20 lead-free. You can't say that. All's you can say is,
21 here's the method we used, here's the analytical
22 sensitivity. We can't say if there's anything there or
23 not below that.

24 Q. This 1972 McCrone report, where it's produced
25 to us by Johnson & Johnson, Exhibit 0679, it says, "Do

1 not use this report. Replace by another version."

2 Have you considered this?

3 A. I have.

4 Q. And in this report, do they actually document
5 asbestos and talk about asbestos found in Batch
6 Samples 108T and 109T?

7 A. Yes, sir, they did. They reported it as
8 present.

9 Q. And specifically with regard to tremolite, in
10 the report that says, "Do not use this report," do they
11 totally -- do they list the total tremolite content of
12 the two samples would be approximately 0.5 percent for
13 108T and about 0.2 to 0.2 -- 0.2 to 0.3 percent for
14 109T?

15 A. Yes.

16 Q. And in the new report, the revised report, is
17 it dated the same date?

18 A. It is.

19 Q. And does it have -- is this information, these
20 numbers and calculations, removed from the report?

21 A. They are.

22 Q. And then the next document I think it's related
23 to this document here. This is Exhibit 225.

24 MR. SATTERLEY: Request permission to approach,
25 Your Honor?

1 THE COURT: You may.

2 BY MR. SATTERLEY:

3 Q. And just so we're clear, the -- well, let me
4 just withdraw that and go right to this report.

5 225 into evidence. It says, "McCrone study
6 being redone." Something...

7 A. I think that says, "New one is in master
8 file" -- in --

9 Q. Oh. "New one is in master talc file."
10 Do you see that?

11 A. Yes, sir.

12 Q. And we see this -- over here, it says,
13 "Walter C. McCrone" there?

14 A. Yes.

15 Q. And if we go to the letter itself, it's dated
16 the same day, October the 27th?

17 A. Yes, sir, it is.

18 Q. And it says -- this is from a fellow named
19 Ian Stewart.

20 You recognize -- or did you -- you recognize
21 Ian Stewart to be an analyst that worked at McCrone?

22 A. Yes, sir. He was both a PLM and electron
23 optics guy. I've known Ian for almost 30 years.

24 Q. Did Ian Stewart work for McCrone for many, many
25 years before he went to the RJ Lee Company?

1 A. Yes, sir, he did.

2 Q. And have you read and seen reports and letters
3 from Ian Stewart many times in the past?

4 A. Specifically in cosmetic talc it's -- since
5 I've been involved in this, but in other litigation in
6 the past, especially when he was at the RJ Lee Group,
7 yes, sir.

8 Q. It says -- Ian Stewart says, "Here is our
9 report on the baby powder samples. I hope to have the
10 Shower to Shower report out to you soon, but something
11 always seems to break loose when I sit down to write
12 it. Yours sincerely." And it's signed by Ian Stewart;
13 correct?

14 A. Yes, sir.

15 Q. Moving forward in time, in the '70s, are there
16 many other tests and testing results where McCrone does
17 analysis for talc samples?

18 A. Yes, sir.

19 Q. And are there instances where McCrone reports
20 there's no asbestos?

21 A. A lot of instances, yes, sir.

22 Q. And is there reports where McCrone reports
23 there's asbestos present?

24 A. Yes, sir.

25 Q. I want to show you another document,

1 Exhibit 158.

2 And this is a -- Exhibit 158 is a confidential
3 document. "New reagent system plant trial at Windsor
4 Minerals."

5 Have you considered this, Dr. Longo?

6 A. Yes, sir, I have.

7 Q. And how is this significant in your opinions
8 here?

9 A. It's significant in that they were trying out
10 different flotation, meaning, one of the ways to clean
11 up the processed talc after it's been milled is to --
12 or before milling is to flotage it to -- just like
13 concentration method. You put in a type of surfactant
14 and it bubbles, sticks to the talc, the big heavy stuff
15 and chunks can go to the bottom.

16 Here they were experimenting with a way to
17 flotage out and remove chrysotile asbestos.

18 And you have to ask yourself, if there's no
19 asbestos in here, why are you trying to develop a
20 system to remove something that's not in the product?
21 Or not in being milled.

22 So this is important to show -- and we're going
23 to be working on this to see if we can use this
24 technology from that data to concentrate the
25 chrysotile.

1 MR. CALFO: Your Honor, I move to strike. That
2 was complete speculation.

3 THE COURT: The jury will ignore the last two
4 sentences of the witness.

5 BY MR. SATTERLEY

6 Q. Dr. Longo, it says, "The use of citric acid in
7 the depression of chrysotile asbestos and other mineral
8 species has been developed at Windsor Minerals in
9 response to the potential need for a means to exclude
10 extremely low levels of these contaminants from the
11 finished product of the beneficiation process."

12 Correct?

13 A. Yes, sir.

14 Q. Is that what you're talking about with regards
15 to trying to remove asbestos from the product?

16 MR. CALFO: Your Honor, again, objection.
17 Calls for speculation on the part of this witness. No
18 foundation.

19 THE COURT: That -- that's overruled. He's
20 interpreting the document.

21 THE WITNESS: Yes, sir.

22 BY MR. SATTERLEY:

23 Q. It says, "The use of these systems is strongly
24 urged by this writer to provide the protection against
25 what are currently considered to be materials

1 presently" -- "presenting a severe health hazard and
2 are potentially present in all talc ores in use at this
3 time."

4 And it's signed off by Vernon Zeitz; correct?

5 A. That is correct.

6 Q. And health hazards is beyond your area of
7 expertise; correct?

8 A. Yes, sir, it is.

9 Q. And then if we flip over to Table 15 of this
10 1974 document.

11 And it says, "Asbestiform fibers counted by
12 Walter C. McCrone," and it's got "ore, product, ore,
13 product, ore, product."

14 And then it's got fiber identification,
15 "probably chrysotile, probably chrysotile," and the
16 fifth one down has got eight and it says "chrysotile,"
17 and the final one says "chrysotile"; correct?

18 A. Correct.

19 Q. Is this further documentary evidence of the
20 presence of asbestos, in your opinion, in the Vermont
21 ore and product?

22 MR. CALFO: Objection, Your Honor. No
23 foundation. Calls for speculation on the part of this
24 witness.

25 THE COURT: Overruled.

1 THE WITNESS: Yes, it does, especially at these
2 concentrations, because they're talking about counts
3 per EM grid. So these are the number of fibers found
4 on an individual grid at the detection limits that they
5 were using at the time, which were somewhat antiquated.
6 BY MR. SATTERLEY:

7 Q. Moving forward from 1974 to 1975, I would like
8 to present you with what's been admitted as
9 Exhibit 724, dated November the 5th, 1975, from Walter
10 McCrone -- from the McCrone laboratory, Gene Grieger,
11 to Vernon Zeitz.

12 Now, Vernon Zeitz, we saw his name on the last
13 document; right?

14 A. Yes, sir.

15 Q. And this one is -- is written to him from
16 McCrone -- from Gene Grieger, senior research physicist
17 at McCrone; correct?

18 A. That is correct.

19 Q. And does he document and report and have an
20 attachment regarding the presence of -- presence of
21 fibers or bundles with regards to the material they're
22 looking at?

23 A. That is correct. They do.

24 Q. It talks about Table 1 showing "actual fiber
25 counts and the approximate equivalent concentration in

1 parts per million of amphibole particles, which we
2 found in these samples.

3 "Some of them seem rather high. One had ten,
4 and one had nine amphiboles. Most of these come in
5 bundles of one, two, or three fibers, with anywhere
6 from two to five amphiboles in a bundle?"

7 Do you see that?

8 A. Yes, I do.

9 Q. Now -- and then there's a chart on the next
10 page; correct?

11 A. There is.

12 Q. And we see the references here to the
13 amphiboles found; right?

14 Oh, I'm sorry. "Fibers of asbestos found,"
15 correct, Dr. Longo?

16 A. That is correct.

17 Q. And some of these reference to "HC." Do you
18 see the -- the sample being HC?

19 A. I do.

20 Q. And based upon your review of the internal
21 documents, do you have an opinion as to what HC
22 represents?

23 MR. CALFO: Objection. Calls for speculation
24 from this witness. No foundation.

25 THE COURT: Mr. Satterley, you put a circle

1 around one that's not on the same level even though --

2 MR. SATTERLEY: I'm sorry, Your Honor.

3 THE COURT: Your yellow marker mismarked it.

4 MR. SATTERLEY: I'm upside down. Which one?

5 THE COURT: It's the third one down. That one
6 is not an HC.

7 MR. SATTERLEY: Oh.

8 Oh, it is HC, Your Honor. There's two HCs
9 right beside each other.

10 THE COURT: All right.

11 MR. SATTERLEY: And both of those are HC.

12 THE COURT: Okay. I -- I stand corrected.

13 MR. SATTERLEY: I apologize, Your Honor. I was
14 trying to do it upside down.

15 THE COURT: All right. The objection is
16 overruled.

17 You may respond to the question.

18 BY MR. SATTERLEY:

19 Q. Do you have an opinion about HC and what that
20 represents based upon all the internal documents you've
21 looked at?

22 A. The H stands for Hammondsville, and the C
23 stands for cosmetic.

24 Q. In your opinion, Dr. Longo, is this another
25 instance of confirmed fibers of asbestos in the

1 cosmetic talc back in 1975?

2 MR. CALFO: Objection. Calls for speculation.
3 No foundation for this witness.

4 THE COURT: That's overruled.

5 THE WITNESS: Yes, it does.

6 BY MR. SATTERLEY:

7 Q. Now, in your testing -- and we're going to get
8 to your testing in a little bit -- you have taken
9 photographs, you've done count sheets, you've done
10 selected area electron diffraction you've done
11 chemistry analysis, EDS; correct?

12 A. That is correct.

13 Q. And you've produced all -- or you've printed
14 all that out and made detailed reports of that and
15 turned it of to the attorneys for these companies;
16 correct?

17 A. That is correct.

18 Q. And in -- in your testing, in your analysis,
19 we're able to look at the actual photographs and the
20 length and the width of the various fibers you found;
21 correct?

22 A. That is correct.

23 Q. Okay. In -- in -- in many of these historical
24 testings -- not all of them, but in many of them -- do
25 we have that same advantage, to look at the

1 photographs?

2 A. No, most of the time not. Very rare.

3 Q. All right. Do we have most of the underlying
4 raw data, being the chemistry, the selected area
5 electron diffraction, to analyze ourselves to see --
6 see what it says?

7 A. Sometimes you have the selected area electron
8 diffraction and occasionally a count sheet, but it's
9 mostly this type of information, where they just
10 say, "We found this."

11 Q. The next one is Exhibit 713.

12 MR. SATTERLEY: May I approach again,
13 Your Honor?

14 THE COURT: You may.

15 BY MR. SATTERLEY:

16 Q. This is 1977, going forward in time.
17 EMV Associates, you understand that to be a laboratory
18 that Johnson & Johnson sent materials to for analysis
19 on a few occasions?

20 A. Yes, sir.

21 Q. And is this analysis of nine talc samples that
22 you have read and considered in formulating your
23 opinions?

24 A. I have.

25 Q. And is this dated, Exhibit 713, April the 1st,

1 1977?

2 A. That is correct.

3 Q. By the EMV Associates; correct?

4 A. Yes, sir.

5 Q. And do they have on this -- in this instance,
6 do they have pictures of -- of things we can look at,
7 the chemistry and the morphology of what's depicted
8 there?

9 A. Yes.

10 Q. And is there reference to composite?
11 Do you know what a composite is?

12 A. Composite typically means that you have mixed a
13 couple different sources into something. Say, for
14 example, you take a composite of maybe two different or
15 three different areas of the talc from a mine or -- and
16 make it all one composite so you can try to analyze
17 what's from these two or three different areas.

18 Q. And here, they say, with regards to --

19 Well, first of all, I've heard before
20 composites and blending. Do you know what blending --
21 blending of talc is?

22 A. Blending is -- can be the same thing, but
23 you're just mixing it all together. And typically,
24 blending and milling -- or blending, you're putting in
25 some of the other nontalc ingredients. Just depends on

1 who was saying it.

2 Q. And it says, "Both large and small" -- "A
3 composite, both large and small fibrous tremolite
4 particles found. See Figure 4."

5 And then it says right below that, "Old stock
6 composite, one small fibrous tremolite particle was
7 found. See Figure 6."

8 Do you see that?

9 A. Yes, sir.

10 Q. So if we go over to Figure 4, that's what we
11 were looking at just a few minutes ago; right?

12 A. Yes.

13 Q. And then we've got -- Figure 6 here, we've got
14 more photographs from 1977 with the chemistry; right?

15 A. Yes, we do.

16 Q. If we zoom in on the top photo, "800X," does
17 that mean 800 magnification?

18 A. It does.

19 Q. And the jury heard last Thursday, when Mr. Poye
20 was here, the difference between talc, platy talc and
21 fibrous talc and fibers and asbestiform.

22 Are you able -- from this -- this 1977 photo,
23 are you able to determine, is this fibrous?

24 A. It meets the definition of a -- of fibrous,
25 yes, sir. It's got parallel sides, and it has an

1 aspect ratio easily equal to or greater than 5 to 1.
2 That looks like an aspect ratio more than on the lines
3 of 20, 30, 40 to 1. And we are looking at a bundle.

4 Q. How do we know that's a bundle?

5 A. Well, a bundle is defined as either two or
6 three fibers parallel touching, and if you look closely
7 on the sides or the bottom, you can see what looks like
8 a splayed end coming off, and you can see individual
9 fibers, even from this xerox copy of -- of this
10 photomicrograph, is what we call them. That's a
11 bundle.

12 Q. And I want to use J&J's definition -- this is
13 Exhibit 430, which is into evidence -- on asbestos.
14 And this is a Johnson & Johnson document. The
15 definition here they have for asbestos, under the J4-1
16 and the TM7024 -- and we'll talk about those methods in
17 a little bit -- it says, "Asbestos is defined to be the
18 fibrous serpentine chrysotile and the fibrous form of
19 the amphibole group as represented by amosite,
20 anthophyllite, crocidolite, tremolite, and actinolite."

21 Is that your understanding of the definition of
22 asbestos?

23 A. Yes, sir, the fibrous form of it.

24 Q. And so if we -- if -- if we have a fibrous form
25 of serpentine, curved serpentine, would that

1 definition -- would that meet the definition of
2 asbestos?

3 A. Yes, sir. Either curved or straight. But
4 typically, curved is seen in bulk samples, and every
5 now and then, you will see it in a TEM because of the
6 higher magnification and the smaller particles.

7 But that is a typical definition, fibrous forms
8 of these amphibole -- amphibole groups.

9 Q. Okay. So right here, back -- Ms. Clancy points
10 out -- where it says "fibrous tremolite" under the J&J
11 definition that we just read, does that fibrous
12 tremolite used in their definition equate to asbestos?

13 A. Yes, sir, it does.

14 Q. One other document, and then I'm going to
15 bounce back to heavy liquid for a minute.

16 Exhibit 726, are you familiar with Forensic
17 Analytical out of Hayward, California?

18 A. Yes, sir, I am.

19 Q. And a fellow named Mark Floyd?

20 A. Yes, sir. I know Mr. Floyd.

21 Q. Mr. Floyd, is he an analyst that identifies
22 asbestos in materials and has written in reports in
23 that regard for many years?

24 A. Many years. Doing it almost as long as me.

25 Q. And have -- in fact, have you analyzed or seen

1 his reports with regards to the presence of asbestos in
2 talc?

3 A. Yes, sir, I have.

4 Q. And this into evidence as Exhibit 726. Does
5 this, Dr. Longo, document the presence of asbestos in
6 off-the-shelf Johnson's Baby Powder in 2004?

7 A. Yes, sir, it does.

8 Q. And is -- Mr. Floyd signs off on it right here?

9 A. Yes. That's his -- that's his initials.

10 MR. CALFO: Objection, Your Honor. There is no
11 foundation for this witness to testify about this.

12 MR. SATTERLEY: Let's zoom in.

13 THE COURT: That's overruled.

14 BY MR. SATTERLEY:

15 Q. Do you see Mr. Floyd -- Mark Floyd, his name
16 right there, Dr. Longo?

17 A. Yes, sir, I do.

18 Q. And with regards to this Johnson's Baby Powder
19 off the shelf, "AN" -- it says, "Asbestos type AN."
20 What type of asbestos was he reporting in 2004 on
21 Johnson's Baby Powder?

22 MR. CALFO: Objection. Calls for speculation
23 from this witness.

24 THE COURT: Overruled.

25 THE WITNESS: "AN" stands for anthophyllite.

1 BY MR. SATTERLEY:

2 Q. And just to understand what has happened here,
3 you understand that this sample was sent to Mr. Floyd
4 by a television -- television station in Sacramento?

5 A. Yes, sir.

6 Q. And does this, in your view, Dr. Longo, add to
7 the -- all the other samples showing the presence of
8 asbestos in Johnson's Baby Powder in the '70s, '80s,
9 '90s, and -- and into the 2000s?

10 MR. CALFO: Objection. No foundation. Calls
11 for speculation from this witness.

12 THE COURT: That's overruled.

13 THE WITNESS: Yes, it does.

14 BY MR. SATTERLEY:

15 Q. Now, we've introduced lots of documents into
16 evidence, and I'm not going to go over all of them with
17 you, obviously, Dr. Longo.

18 But are there other instances in the historical
19 documents regarding Johnson's Baby Powder where
20 asbestos has been documented?

21 A. Yes, sir.

22 Q. Okay. And with regard to Cashmere Bouquet,
23 Colgate-Palmolive, have you also looked at the -- some
24 of the historical documents regarding the presence of
25 asbestos in -- in the Cashmere Bouquet product?

1 A. Yes, I have.

2 Q. And I'm going to -- not going to go over very
3 many, but there are a few into evidence that I wanted
4 to ask you about.

5 By the way, do you have a whole binder full of
6 Colgate reliance? I think I -- it's on the -- right
7 next to the screen.

8 A. Yes, sir, I do.

9 Q. No. Up. Up.

10 A. I knew they were here somewhere.

11 Q. Okay. But do you have two binders? Are those
12 Cashmere Bouquet reliance materials?

13 A. They are.

14 Q. And do they document, going all the way back
15 into the late 1960s and the 1970s, the presence of
16 asbestos in Cashmere Bouquet?

17 MR. MULARCZYK: Objection. Hearsay. Vague.

18 THE COURT: It's vague. You may rephrase your
19 question.

20 BY MR. SATTERLEY:

21 Q. Okay. Are there many --

22 THE COURT: We don't do that Joe McCarthy
23 business of, "Do you have it in the satchel?"

24 MR. SATTERLEY: I understand. Yes, Your Honor.
25 Yes, Your Honor.

1 BY MR. SATTERLEY:

2 Q. Do you have reliance lists, Dr. Longo,
3 regarding identification of asbestos before you?

4 A. I do.

5 Q. All right. One of the reliance lists, does it
6 include documents -- this is going to be
7 Exhibit 3584 -- from McCrone to Joe Simko at
8 Colgate-Palmolive in 1974?

9 A. Yes, sir, it does.

10 Q. And we heard from the corporate representative
11 yesterday, Ms. Scala, Diana Scala --

12 THE COURT: Does that have a number on it?

13 MR. SATTERLEY: Yes. This is Exhibit 3584,
14 Your Honor.

15 BY MR. SATTERLEY:

16 Q. And this is February 5, 1974, regarding the
17 samples designated 516. And you considered this,
18 Dr. Longo; correct?

19 A. Yes, sir, I did.

20 Q. And did McCrone report back to Colgate in 1974
21 that all three samples had chrysotile asbestos in them?

22 A. Yes, sir, they did.

23 Q. And in this particular instance, was there
24 photographs taken -- photomicrographs taken -- Scala
25 Exhibit 18 -- this is Scala Exhibit Number -- were

1 there photomicrographs of -- of the Cashmere Bouquet
2 Sample 516 by McCrone back in 1974?

3 A. Yes, sir.

4 Q. And what we've got displayed on the screen
5 here, based upon what McCrone reports in 1974 and based
6 upon your analysis of -- of -- of this report, do you
7 have an opinion whether this is documenting asbestos?

8 A. It shows what asbestos -- what chrysotile
9 asbestos would look like under the transmission
10 electron microscope.

11 Q. And you talked about both straight and curved.
12 Does it show some curved fibers?

13 A. Fibers and bundles, yes.

14 Q. Okay. And is this just one instance of the
15 identification of asbestos in the -- in the Colgate
16 product?

17 A. Yes, sir.

18 Q. And we know other photographs here -- let me
19 just -- too many papers here.

20 Dr. Longo, in 1974, does McCrone report back to
21 Colgate that it's a chrysotile fiber in the North
22 Carolina Regal sample?

23 A. Yes, they do.

24 Q. And when we get to your photographs in a little
25 bit, do you have photographs where you have materials

1 that look like -- is that platy talc at the top?

2 A. It's either platy talc or calcium carbonate or
3 one of the other accessory minerals. That's not
4 typically a talc look.

5 What's more like talc is at the top of the
6 chrysotile fiber. It's more of a plate shape, little
7 irregular plate shape. That, in my opinion, is what
8 the morphology of platy talc should look like.

9 Q. Is that, in your view, fiber?

10 A. Yes, sir. That meets all the current regulated
11 asbestos definitions by transmission electron
12 microscopy. It has parallel sides and has an aspect
13 ratio, the length divided by the width, of 5 to 1 or
14 greater. That's, oh, probably in the 20- to 30-to-1
15 range.

16 Q. The previous photograph here, does it say
17 "chrysotile fibers" here at the bottom?

18 A. Yes, sir, it does.

19 Q. And is that, in your opinion, a fiber,
20 Dr. Longo?

21 A. Yes, sir. That meets the definition. There
22 are counting rules for determining fibers of asbestos
23 or bundles. That's classic.

24 Q. Is -- is there, in this photograph, examples of
25 the talc or talc particles blocking part of the view of

1 fiber -- a chrysotile fiber?

2 A. Yes, sir. You can see at the top end of the
3 fiber, it looks like we have a talc -- very large talc
4 plate laying over it. Then you have some smaller talc
5 plates to the right of the fiber.

6 So that's a pretty heavily loaded sample, to
7 see that much in one area of the TEM. TEM grid.
8 Excuse me.

9 Q. Now, in regards to your opinions on historical
10 identification of asbestos in Cashmere Bouquet, other
11 than McCrone, are there other laboratories that have
12 likewise found asbestos in the Cashmere Bouquet
13 product?

14 A. Yes, sir.

15 Q. And have you included those in your reliance
16 materials?

17 A. I have.

18 Q. And who are some of the other laboratories?

19 MR. MULARCZYK: Objection. Hearsay.

20 THE COURT: Overruled.

21 THE WITNESS: Besides McCrone, you have -- oh,
22 god, I'm having a mental...

23 There's -- there's -- I'm sorry.

24 BY MR. SATTERLEY:

25 Q. Yeah, you've got your binders there.

1 A. Yeah, let me just look.

2 Q. It's not a memory test.

3 A. I'm trying to go off -- yeah, test -- memory
4 test.

5 Mt. Sinai. We have, you know, some of the FDA
6 work in the early years. Johns-Manville. Cyprus, I
7 believe, did some testing. So there was some others.

8 Q. Is -- did Johnson -- in your materials, did
9 Johnson & Johnson --

10 A. Johnson & Johnson, too. I'm sorry.

11 Q. And Fred Pooley, specifically?

12 A. Yes, sir.

13 Q. And Mark Floyd at Forensic Analytical, did --
14 does his lab at Hayward look at Cashmere Bouquet and
15 found asbestos?

16 A. I believe so.

17 Q. Now, heavy liquid separation. Historically,
18 you mentioned Dr. Pooley did heavy liquid separation
19 and found asbestos in talc; correct?

20 A. Correct.

21 Q. You mentioned that -- and we showed
22 documents -- at Dartmouth, Dr. Reynolds looked at
23 heavy liquid -- heavy liquid separation and found
24 asbestos in talc?

25 A. Correct.

1 Q. Have you reviewed the test, the test results --
2 excuse me -- the testimony of Dr. Alice Blount?

3 A. I have.

4 Q. And have you seen her published paper?

5 A. Yes, sir. In 1990, 1991, peer-reviewed
6 published paper doing the exact same thing.

7 Q. And using the heavy liquid separation, did
8 Dr. Blount report and publish upon asbestos in talc
9 products?

10 A. Yes, sir.

11 Q. And specifically into evidence is Exhibit 160,
12 is the letter from Dr. Blount to one of the attorneys
13 for Johnson & Johnson in 1998.

14 And have you considered this with regards to
15 Sample I?

16 A. Yes, sir, I have.

17 Q. And in 1998, this letter indicated that
18 Sample I was Vermont, Johnson & Johnson talc; correct?

19 A. Yes, sir. It was a Johnson & Johnson
20 off-the-shelf product. And in that time period, it
21 would have been from Vermont. 1989, 1990, the talc
22 source was Vermont during that time.

23 THE COURT: Mr. Satterley, I neglected to write
24 down the exhibit number. I don't know whether you said
25 it or not.

1 MR. SATTERLEY: 160, Your Honor.

2 THE COURT: Thank you.

3 BY MR. SATTERLEY:

4 Q. And you understand that -- Dr. Blount to be a
5 geologist/mineralogist?

6 A. Yes, sir.

7 Q. And have you considered her, not only her
8 published work but her testimony and her handwritings
9 and her letters back in the '90s regarding her testing
10 of this product?

11 A. In her published paper.

12 Q. Okay. So we've got Dr. Pooley, Dr. Reynolds,
13 Dr. Blount, Lee Poye, and MAS, your lab. In all five
14 of those instances, when heavy liquid separation was
15 done with regards to looking for asbestos in cosmetic
16 talc products, were asbestos identified?

17 MR. CALFO: Objection, Your Honor. There is no
18 foundation for -- for all those.

19 THE COURT: It's overruled.

20 THE WITNESS: Yes, sir. Asbestos was
21 identified using the heavy liquid density separation
22 method, both the protocol, or the method, for TEM as
23 well as PLM, where we actually used the Blount method
24 that she published in 1990.

25 BY MR. SATTERLEY:

1 Q. Now, in all the materials you reviewed, have
2 you seen, since the Blount publication -- since the --
3 in -- in the early 1990s -- have you seen Johnson &
4 Johnson testing where they tested their talc by heavy
5 liquid separation at any time in the last 28 years,
6 since that paper was published?

7 A. No, sir, I've never seen any documents saying
8 that they were using...

9 Q. At any point in time, have you seen any
10 documents that Colgate-Palmolive or any of their
11 analysts tested their talc by using the heavy liquid
12 separation method?

13 A. No, sir.

14 Q. Now I want to talk about negative tests.

15 You mentioned limitations of XRD. Tell us your
16 opinion about reports regarding XRT -- XRD that report
17 nondetect, from an analytical standpoint, for the
18 identification of asbestos in talc. What does that
19 mean to you?

20 A. It means that the concentration of asbestos, if
21 present, wasn't greater than the detection limit,
22 which, for XRD, is pretty high, depending on what
23 you're looking at.

24 So your detection limit in XRD is probably -- a
25 really good XRD with good technicians may be for

1 tremolite .2, .3 percent by weight. Today, you may get
2 down to .1. But in the '70s, it was around .4, .5.

3 Anthophyllite is even higher, and so is
4 chrysotile.

5 So using XRD and getting a negative in XRD only
6 tells you is -- there's not a -- really a lot of
7 asbestos in here, and that's it.

8 Q. With regards to the use of XRD, have you
9 studied the -- what's called the J4-1 method?

10 A. Yes, sir.

11 Q. And is it your understanding that the J4-1
12 method was a method adopted by industry -- the
13 Cosmetics, Toiletries and Fragrances Association -- in
14 1976?

15 A. Yes, sir, it was.

16 Q. And did the J4-1 method have the x-ray
17 diffraction as the first step in the process?

18 A. They did.

19 Q. And did J4-1 method -- did the J4-1 method ever
20 include a TEM analysis?

21 A. No, sir.

22 Q. Did the J4-1 method ever include heavy liquid
23 separation?

24 A. It did not.

25 Q. Did the J4-1 method have a stop, you stop

1 analyzing, if you don't find anything by x-ray
2 diffraction or optical microscope?

3 A. I'm sorry. Could you repeat that?

4 Q. Sure. Let me just show you what's already into
5 evidence. It's 727.

6 This is the -- this is the J4-1 -- the actual
7 J4-1 method into evidence. It says "J4-1" over here.
8 Over here.

9 A. Yes, sir. I'm familiar --

10 Q. You recognize that, sir?

11 A. I'm familiar with this document.

12 Q. Okay. And at the bottom, it's got, "x-ray
13 diffraction" here, "acid leach" over here, "optical
14 microscopy," and then "fibrous morphology," and "stop.
15 Stop. Stop."

16 Do you see that?

17 A. Yes, sir.

18 Q. All right. So your understanding of the way
19 the J4-1 method works is, if you don't find anything in
20 the --

21 A. X-ray diffraction.

22 Q. -- x-ray diffraction showing amphibole, you
23 stop; correct?

24 A. Correct.

25 Q. Okay. So -- but if you do find a peak, then

1 you would go over to the optical microscopy and look
2 for fibrous materials; correct?

3 A. Correct.

4 Q. And if you don't find anything, you stop?

5 A. Correct. Well, if you do find, you stop. It
6 says, "Asbestiform amphiboles present." If you don't
7 find it, it's stop to the right, which says
8 "Asbestiform amphiboles absent."

9 That's -- so it was "as soon as you find a
10 negative test, you stop" type of protocol.

11 Q. Based upon analytical techniques and what was
12 known, do you have an opinion whether or not this was
13 an appropriate technique for the already -- the
14 identification of asbestos?

15 MR. CALFO: Objection, Your Honor. This
16 witness had no knowledge of what was known in the '70s.

17 THE COURT: That's overruled. He may opine.
18 You can cross-examine him about it.

19 THE WITNESS: It's an appropriate method to
20 find out information, but you have to be very careful
21 with it, if you understand the detection limits. There
22 is products out there that has enough asbestos in it
23 that it's fine.

24 But when you're dealing with cosmetic talcs and
25 you're dealing with trace levels, the XRD method is --

1 should be done with -- very carefully.

2 Today, it's -- I don't think it's worthwhile to
3 analyze by XRD at all for Italian and Vermont talcs.
4 It doesn't give you -- even if it's positive, you can't
5 determine if it's fibrous or not because it doesn't
6 give you morphology. So why do it?

7 BY MR. SATTERLEY:

8 Q. Exhibit 171 is the CTFA minutes, 1977. And it
9 says, with regards to the J4-1 method --

10 First of all, just -- you -- you've looked --
11 you reviewed the CTFA minute meetings; correct?

12 A. Yes, sir, I have.

13 Q. It says, with regard to the J4-1, "Test and
14 verify CTFA Method J4-1 for this purpose: Assurance
15 that method is accurate, reliable, and practical. He
16 reported" -- "He then reported these objectives have
17 not yet been achieved."

18 And it's reported in 1977 that six out of the
19 seven labs failed to identify spiked talc with
20 asbestos; correct?

21 A. With tremolite.

22 Q. And from an analytical standpoint, does this
23 demonstrate the inadequacies or the weaknesses of the
24 XRD method?

25 MR. CALFO: Objection, Your Honor. Calls for

1 speculation on the part of this witness.

2 THE COURT: Overruled.

3 THE WITNESS: Yes. It has -- it has detection
4 elements. So if you do a spiked sample and you can't
5 find it, then how can -- for this particular asbestos,
6 how can you find it in an unknown sample?

7 It's -- it's just not a very good method for
8 these types of analysis of cosmetic talc. Even today,
9 with state-of-the-art equipment, the concentrations
10 that are typically present are going to be lower than
11 what the XRD can see.

12 And couple that with the fact you can't tell if
13 it's fibrous or not, is -- is an issue.

14 BY MR. SATTERLEY:

15 Q. And it's referring to a "Dr. Schelz,"
16 S-c-h-e-l-z, "then proposed a round-robin partial
17 retest."

18 Do you see that?

19 A. Yes, sir.

20 Q. And then I'd like to show you what's into
21 evidence and what you considered, 233. This is
22 Johnson & Johnson document, March 1, 1978, to Charles
23 Haynes at the Cosmetics, Toiletry and Fragrance
24 Association.

25 And it's talking about the -- "I'm enclosing a

1 table which breaks the code for the recently completed
2 CTFA task force on round-robin testing of the consumer
3 talcum products for asbestiform amphibole minerals."

4 Do you see that?

5 A. Yes, sir, I do.

6 Q. It says, "The names and addresses and phone
7 numbers are also included for those individuals who
8 participated whose products were involved."

9 Do you see that?

10 A. Yes, I do.

11 Q. And he -- he writes in this confidential 1978
12 memo, which is Exhibit 233, "Please contact me" -- and
13 there's a phone number -- "upon receipt of this letter
14 so that I may destroy the only other copy of this
15 table, which is in my possession."

16 Have you ever seen, Dr. Longo, the table that
17 would break the code regarding the round-robin?

18 A. No, sir.

19 Q. It says on the second -- on this Johnson &
20 Johnson letterhead, second page, "Destroy your copy of
21 the table. Your participation in the final important
22 phase of the round-robin is appreciated. Thank you
23 very much.

24 "Sincerely, John P. Schelz, Chairman, CTFA task
25 force on round-robin testing of consumer talcum

1 products."

2 Do you see that?

3 A. Yes, I do.

4 Q. And he carbon copies the vice-president of
5 science of the CTFA, Dr. Estrin; right?

6 A. Yes, sir.

7 Q. And also someone from the Bristol-Myers
8 Products Company; correct?

9 A. That is correct.

10 Q. And on the last document, Ms. Clancy points out
11 that John Schelz is identified as the chairman of the
12 CTFA task force.

13 Do you see that?

14 A. I do.

15 Q. Now, you've seen and evaluated many documents
16 from Johnson & Johnson, or their consultants, where it
17 says "nondetect."

18 Have you --

19 A. I have.

20 Q. -- not?

21 A. Yes, sir, I have.

22 Q. And have you identified and seen many documents
23 where it says they're looking for asbestos and they're
24 saying "nonquantifiable"?

25 A. I have.

1 Q. How can -- if you are of the opinion that
2 there's asbestos in these cosmetic talc products, how
3 can that possibly be when there are so many documents
4 that say "nondetect"?

5 MR. MULARCZYK: Calls for speculation.

6 MR. CALFO: It calls for speculation from this
7 witness.

8 THE COURT: That's overruled.

9 THE WITNESS: It's all about the sample
10 preparation and detection limit, the reason you would
11 have a nondetect. And there is a lot of nondetect
12 analysis by TEM for Johnson & Johnson. But it's all
13 about the detection limit.

14 If you set -- if you have a detection limit
15 that is higher than most, anytime that others,
16 including me, have found asbestos in the product, then
17 it's not surprising. If your method is not sensitive
18 enough, you're not going to detect it. You have to
19 have -- if your detection limit is up here but your
20 asbestos level is down here -- and think of a line,
21 can't find it if it goes below this detection limit --
22 and it's down here, you're going to have negative after
23 negative after negative. When you do find it, you've
24 hit those one or two samples that has a very high
25 concentration of asbestos in it.

1 It's all about the sample preparation and how
2 you do the analysis. If you can have a really
3 sensitive method or not.

4 Q. You talked about the tools you use. As a
5 demonstrative, I have two tools. I've got a bathroom
6 scale that I got at Walgreen's.

7 Do you see it says "Walgreens" on it there?

8 A. Yes.

9 Q. And I've got this type of scale, which -- what
10 do you call this type of scale?

11 A. I would call that a jeweler scale.

12 Q. And if we --

13 A. A not -- a "not very sensitive one" jeweler
14 scale. But it should work for what you're doing.

15 Q. So, for example, in thinking about detection
16 limit, if we have this -- and I've got a half-full box
17 of paperclips -- and we put it on the scale, the
18 bathroom scale I got at Walgreen, does it detect
19 anything?

20 A. No. It's not -- it doesn't have a sensitive
21 detection limit.

22 Now, you would -- not looking what's there, you
23 didn't know that, you would report that there's nothing
24 there. There's nothing on the scale. But that doesn't
25 make that half a box of paperclips disappear. So you

1 can't say there's nothing there unless you know what
2 your detection limit is, et cetera. It's all about the
3 sample prep.

4 Q. This one I don't know how to use.

5 A. Don't forget -- don't forget the tear button.

6 Q. Okay. So let's move this off here. And put
7 this on.

8 MS. CLANCY: True it.

9 BY MR. SATTERLEY:

10 Q. True it.

11 All right. Let's see what happens here.

12 Now, this scale is more sensitive. Does it
13 detect and pick up the same paperclips that we couldn't
14 pick up with the bathroom scale?

15 A. Yes, sir. It's more sensitive, so now you have
16 a scale that has a better, more sensitive detection
17 limit. And that's what we have done and others have
18 done using this concentration method to increase the
19 sensitivity.

20 Q. Now -- so the two expressions, or the two --
21 does "ND," does that stand for nondetect?

22 A. Correct.

23 Q. Like you -- there's many reports that say
24 nondetect with regard to samples; correct?

25 A. Correct. When they did the analysis, they did

1 not detect any asbestos. So they put in, you know, ND.

2 Q. And then there's NQ.

3 What does "NQ" represent?

4 A. In these tests, because you don't see this very
5 often at all, NQ would mean nonquantifiable.

6 Q. And are you familiar with the test method
7 written by Johnson & Johnson called 7024, TM7024?

8 A. Yes.

9 Q. And have you analyzed in great detail the Test
10 Method 7024?

11 A. Yes, sir, I have. It's a TEM method.

12 Q. And the 7024 method for the identification of
13 asbestos, in your opinion, does it have limitations?

14 A. Yes, sir, it does.

15 Q. And what limitations does the TM7024 have?

16 A. Well, you start off with the biggest one. It
17 doesn't use the heavy concentration method to prepare
18 the sample.

19 So you have to dilute the sample, say -- again,
20 we'll go back to the 30 or 40 milligrams.

21 50 milligrams talc. In order to make it where you can
22 get it on these little TEM grids, you may have to
23 dilute that a thousand times.

24 So you start off with that. The second problem
25 with it is that it uses this "got to find five fibers."

1 And because you dilute it so much, it doesn't allow
2 you -- let me go back before that.

3 It doesn't allow you to expand the area you're
4 looking at.

5 So, if we're in this courtroom and we're
6 looking for our -- you got a -- a good example of this:
7 You got an acre of grass, high grass, and somebody asks
8 you, can you go find the ten golf balls that might be
9 out there? But we're only going to let you look at
10 this little area over here and see if you find
11 anything.

12 Well, that's what happens with this method.
13 You're looking at these little TEM grids and it doesn't
14 allow you to expand the area to keep looking to see if
15 you can get a better sensitivity.

16 So, if I'm only allowed to look at a little
17 area of that one acre versus walking around the whole
18 acre, which -- which one of those tests have I -- have
19 a better chance to run into those golf balls?

20 And that's the second problem with this. They
21 give you a time limit to how long you can spend doing
22 the analysis.

23 Q. Well, let me -- let me -- so time limit.

24 But let me go back to this.

25 You said five fiber requirement?

1 A. Of any one type of asbestos.

2 Q. Explain that.

3 A. Well, if I analyzed the sample, with all the
4 limitations it has on it, and I find four tremolite
5 fibers, they will say that is nonquantifiable because
6 you have to find five to make it, quote, above
7 background.

8 Not even -- to me, it even makes it a little
9 bit worse. If you find four tremolite asbestos fibers
10 and four actinolite asbestos fibers -- now, those two
11 are related; a little bit more iron in the tremolite
12 chemistry will give you actinolite -- you still say
13 it's nonquantifiable because you didn't have five
14 actinolite and five tremolite or more. Now, say you
15 have four tremolite, four actinolite, and four
16 anthophyllite asbestos. It's still nonquantifiable
17 because you don't have five of each.

18 So, instead of just going, okay, here's what it
19 is, we found these five, this is the concentration, but
20 we don't believe it's above background, even though
21 there is no background of this, that would be a way to
22 at least give you the information and make a decision,
23 but the reports just say nonquantifiable.

24 Q. And have you seen instances where an analyst at
25 McCrone named Kent Sprague writes letters regarding

1 analysis of talc and says, there's no asbestiform
2 minerals there, but we see the backup sheet and the
3 backup data and we see, in fact, that there was
4 asbestos present?

5 A. Yes, sir.

6 Q. This is Exhibit 174, which is into evidence.
7 And, for example, this letter right here, Exhibit 174,
8 is dated 1990. And Kent Sprague reports no
9 quantifiable asbestiform minerals; right?

10 A. Yes, sir.

11 Q. All right. And in this instance, we have some
12 of the backup data. A count sheet. And by the way, in
13 most of the reports where it says nonquantifiable, do
14 we have the backup data?

15 A. No. Just about all of them we do not.

16 Q. There's only a few examples of the backup data,
17 the count sheets like we've got here?

18 A. Yes, sir.

19 Q. All right. In this backup data, does it
20 demonstrate anthophyllite present?

21 A. It does.

22 Q. And does it give the length and the width?

23 A. Yes. The length is 20 and a width is 1.5,
24 which is probably more likely than that a bundle. And
25 if you divide 20 by 1.5, you would have an aspect ratio

1 of about 7 and a half to 1.

2 Q. And in -- would that -- does that meet the
3 definition, anthophyllite, of regulated asbestos?

4 A. Yes, sir. It meets that definition as well as
5 the aspect ratio definition of the 7024 method.

6 Q. And so is this an example of, if you just rely
7 upon the report that says no quantifiable asbestos and
8 don't have the backup data, you would be misled into
9 believing there's no asbestos present?

10 MR. CALFO: Objection. Calls for speculation
11 on the part of this witness.

12 THE COURT: That's overruled.

13 THE WITNESS: Yes, sir. It would be very
14 unclear what that -- for somebody like me very unclear
15 what that means, nonquantifiable. It's either you can
16 count it or you -- or it's not there and you don't.

17 BY MR. SATTERLEY:

18 Q. And in this specific sample also -- we go a
19 couple pages over. Chrysotile. The structure is a
20 fiber. Type is chrysotile. And the length and the
21 width. And it says SAED -- SAED and EDS checked off
22 yes; right?

23 A. Yes, sir.

24 So, again, it's chrysotile asbestos and it --
25 they have all the right boxes checked for it to be

1 asbestos.

2 Q. And the next page -- and, in fact, at the
3 bottom of the next page it says "chrysotile fiber";
4 correct?

5 A. Yes, sir.

6 Q. All right. So in this one -- in this one
7 letter where it says no asbestiform by McCrone, the
8 McCrone Group, no quantifiable amounts of asbestiform,
9 we have two instances of asbestos, chrysotile asbestos
10 fiber and anthophyllite asbestos fiber; correct?

11 A. That is correct.

12 Q. That's Exhibit 174.

13 Now, the -- back to the method. The 7024.
14 It's into evidence as Exhibit 172. It's the actual
15 J&J Method 7024.

16 You've read this in detail; correct?

17 A. I have.

18 Q. And this is a J&J method specification;
19 correct?

20 A. Yes, sir, it is.

21 Q. Background correction. Now, what is that?

22 A. Background correction is that there is stray
23 asbestos fibers floating around in the air that somehow
24 gets on the sample and could confound the results. Or
25 that your laboratory you're using or your lab you've

1 got cross-contamination because you've got some stray
2 asbestos fibers getting in with the analysis.

3 So they call it background correction.

4 Q. And in the protocol and specification, what
5 does J&J say about background correction? Says it has
6 not been necessary. How is that significant or
7 important?

8 A. Well, it's significant because it verifies the
9 same thing we say. For these types of asbestos,
10 tremolite, actinolite, anthophyllite -- you do not have
11 background levels of this material. It's not used
12 in -- in very few asbestos products. Labs don't
13 typically have that poor of laboratory use that they
14 will cross-contaminate. So there's no such thing as
15 a -- ambiguous background level. Asbestos fibers are
16 heavier than air. They do not stay in the air for
17 eternity. They fall out, obeying the basic laws of
18 gravity. You don't have this, quote, background
19 causing contamination levels that somehow interfere in
20 your analysis. And I agree with that. We have seen no
21 background contamination in any of the processed
22 blanks, any of the QCs that we've done on any of these
23 samples. The filters doing the exact same type of
24 analysis are clean, so, therefore, below detection
25 limit of the analysis.

1 Q. So you're running blanks to make sure you don't
2 have contamination in the lab?

3 A. Correct. Blanks. Processed blanks where you
4 do the exact same thing you did to the sample you're
5 analyzing, except you don't put talc in it: heavy
6 liquid, centrifuge, the whole thing. And we analyze
7 the exact same area.

8 Q. So with J&J, when they say, "Background
9 contamination" -- "Background correction has not been
10 necessary, the amount of background asbestos detected
11 has been insignificant in comparison to the levels of
12 asbestos found in contaminated samples," do you agree
13 with that?

14 A. I agree that it's been insignificant. It's --
15 essentially, in our lab and others, it doesn't exist.
16 So it does not interfere with the analysis. So when
17 you find a single fiber or a single bundle in the
18 analysis of tremolite, actinolite, anthophyllite, it is
19 significant. It shows that that came from the cosmetic
20 talc itself and not from some stray contamination out
21 of the lab, in the air from somewhere, what -- whatever
22 it may be.

23 Q. Last question before lunch.

24 MR. SATTERLEY: Can I get one more question in,
25 Your Honor.

1 THE COURT: I was going to cut you off right
2 there.

3 MR. SATTERLEY: I saw you were going to cut me
4 off.

5 THE COURT: I was going to. One important
6 question.

7 BY MR. SATTERLEY:

8 Q. It's preparation and analysis time.
9 Preparation time per sample, including preparation of
10 related materials is one hour.

11 In your opinion, Dr. Longo, is that reasonable?

12 A. Not for what we do on the heavy liquid
13 separation, on the preparation, one hour. We don't --
14 we don't give time limits to our scientists at the
15 laboratory to either prepare a sample or to analyze the
16 sample. Their only requirement is to do it right.

17 MR. SATTERLEY: Now would be a good time for
18 lunch, Your Honor.

19 THE COURT: Ladies and gentlemen. We are going
20 to go to lunch and come back at 1:30.

21 Remember the admonition that it is your duty as
22 jurors not to converse amongst yourselves or with
23 anyone else on any subject connected with the trial or
24 to form or express any opinion thereon until the matter
25 is submitted to you.

1 Enjoy your lunch. See you back in an hour and
2 a half.

3 (Whereupon, the jury having exited the
4 courtroom, the following proceedings were held:)

5 THE COURT: The record will reflect that the
6 jurors have departed the courtroom.

7 Is there anything you need to talk about?

8 MR. SATTERLEY: Not from the plaintiff's
9 perspective, Your Honor.

10 MR. CALFO: No, Your Honor.

11 MR. MULARCZYK: No, Your Honor, thank you.

12 THE COURT: All right. I will see you at 1:30.

13 THE WITNESS: Thank you, Your Honor.

14 (Lunch break taken.)

15 **(Afternoon Session)**

16 (Whereupon, the following proceedings were held
17 outside the presence of the jury:)

18 THE COURT: All right. We're back in session.

19 Is everybody here?

20 Okay. All counsel are here, it appears.

21 Ms. Hill, please bring in the jury.

22 (Whereupon, the jury having entered the
23 courtroom, the following proceedings were held:)

24 THE COURT: Good afternoon, ladies and
25 gentlemen. The record reflect will that the jurors are

1 all in their preassigned seats, counsel is at counsel
2 table, and Mr. Longo is back in the witness box.

3 You will recall you're still under oath?

4 THE WITNESS: Yes, Your Honor.

5 THE COURT: Mr. Satterley, you may continue
6 with your direct examination of this witness.

7 MR. SATTERLEY: Good afternoon, Dr. Longo.

8 Good afternoon, everyone.

9 THE WITNESS: Good afternoon.

10 BY MR. SATTERLEY:

11 Q. We left off talking about the Johnson & Johnson
12 TM7024 and the -- where we were talking about the
13 preparation and analysis time. I read to you,
14 "Preparation time per sample, including preparation of
15 related materials, is one hour."

16 How long does the prep time take in your lab
17 for heavy liquid separation analysis?

18 A. Probably two hours. Two to three hours to do
19 multiple samples.

20 Q. It says, under this J&J method, TM7024.
21 "Analysis search time." Search time. Does that mean
22 looking under the microscope looking for the asbestos
23 fibers or bundles?

24 A. Yes, sir.

25 Q. It says, "The search time per sample is a

1 maximum of two hours."

2 Correct?

3 A. That's what it states.

4 Q. And, from an analytical point of view, you
5 believe it's appropriate, or -- is it even possible to
6 find 20 different asbestos fibers or bundles in a
7 two-hour time frame?

8 A. No. That would be impossible.

9 Q. Is it appropriate, in your view, to put an
10 arbitrary time limit like two hours for searching for
11 asbestos in a sample?

12 A. No. Because, to me, that puts pressure on the
13 microscopist to get done. It's more preferable to let
14 the microscopist take the time he needs till he feels
15 satisfied that he has an adequate search and/or
16 adequate analysis. A sample that may have 15 or 20
17 asbestos fibers in it, it'd probably take two full
18 days.

19 Q. Also on the Exhibit 172, under Section 13,
20 there is a -- I got this one highlighted. This is
21 still 172. Page 7. I'm going to figure this thing out
22 eventually.

23 Under definition of fiber: It says, "An
24 elongated particle with parallel sides and an aspect
25 ratio K" -- oh, "greater than 3 to 1."

1 Do you see that?

2 A. Yes, sir.

3 Q. Is it your understanding that's Johnson &
4 Johnson's definition of a fiber, that's greater than
5 3 to 1?

6 A. Yes, sir.

7 Q. And in some of the regulatory definitions, does
8 regulatory -- some of the regulatory definitions
9 describe a fiber as being greater than 3 to 1?

10 A. Well, that's greater than or equal to 3 to 1.
11 Some of the OSHA documents for fibers are greater
12 than -- greater than or equal to 3 to 1. So that
13 follows along the Federal Government on occupational
14 exposure for sizes of the fiber -- for the aspect ratio
15 of the fibers.

16 Q. And it says, "The definition employed may vary
17 with the needs of the client."

18 Do you see that?

19 A. Yes.

20 Q. Have you seen in any of the regulatory
21 framework -- whether it be OSHA, EPA, ISO -- that the
22 definition of what a fiber is needs to vary depending
23 upon who the client is or what the client needs?

24 A. No. There's two definitions of fibers on
25 aspect ratios. One is greater than or equal to 3 to 1

1 for occupational exposure analysis and the other one is
2 the standard TEM analysis where it's greater than or
3 equal to 5 to 1 aspect ratio. Those are the only two
4 aspect ratios that I know of for optical microscopy or
5 transmission electron microscopy.

6 Q. This 7024, this method that we've been talking
7 about, is this generally accepted in the scientific
8 organizations as a proper way to analyze samples for
9 the presence of asbestos?

10 A. It's not in any of the standard protocols.
11 Using this type of method it has evolved since then.
12 And it's -- you know, in order to be fair, there's been
13 this running debate, is it McCrone's method or is it
14 J&J's method, depending on who you ask.

15 Q. The -- let's switch gears now and take this to
16 the side, and let's go to -- let's go to testing and
17 testing results.

18 What is the NIST or the NIST standard?

19 A. That is the National Institute of Standard and
20 Technology, and all laboratories that are certified or
21 doing this work should have a NIST standard for all the
22 regulated asbestos. They sell you a bottle of
23 tremolite asbestos that's certified by the National
24 Institutes of Standard and Technology, and a bottle of
25 anthophyllite, chrysotile, amosite, crocidolite. And

1 it's a requirement to have these standards in your lab
2 for your certifications.

3 MR. SATTERLEY: May I approach, Your Honor?

4 THE COURT: You may.

5 BY MR. SATTERLEY:

6 Q. This is marked for identification purposes only
7 as 1046. Is this a NIST standard of tremolite asbestos
8 that your laboratory has and photographs were taken by
9 your laboratory?

10 A. Yes. This is our NIST standard for tremolite
11 and those are our photographs.

12 Q. And we're going to display now the 1046. And
13 it's hard to see. But does it say "1867 bulk asbestos
14 uncommon" and then identifies tremolite?

15 A. Yes.

16 Q. And did your laboratory take the NIST standard,
17 put it under the TEM, and take photographs of it so
18 that we could see what the standard tremolite asbestos,
19 according to the National Institute of Standards and
20 Technology, what it looks like?

21 A. Yes.

22 Q. If we go to the second page of 1046, do the
23 photographs reflect -- reflected here represent
24 tremolite that your laboratory took from the tremolite
25 standard of the National Institute of Standards and

1 Technology?

2 A. Yes. Those are two asbestos tremolite
3 structures on the left-hand side, and on the right-hand
4 side is the corresponding chemistry for the --
5 essentially the pattern that tremolite has for the one
6 on the very -- the very tall one is silicon and then --

7 Q. This right here?

8 A. Yes.

9 And then magnesium and then calcium.

10 Q. This?

11 A. And then sometimes a little iron to the further
12 on the right.

13 Then that really big peak all the way to the
14 right is copper, because it's on a copper grid.

15 Q. That's the grid itself?

16 A. Correct.

17 Q. And you said iron. Is this a little iron peak
18 there?

19 A. Yeah. Sometimes it's there, sometimes it's
20 not.

21 Q. And this right here, that I put my -- that's
22 the calcium?

23 A. Correct.

24 Q. And is that calcium distinguish tremolite from
25 anthophyllite or talc?

1 A. It does.

2 Q. If you had no calcium there and you had this
3 pattern, would that be consistent with anthophyllite?

4 A. It would be -- yes. It would be close to
5 anthophyllite or fibrous talc.

6 Q. And is fibrous talc and anthophyllite
7 chemistry, the chemistry of it, substantially similar?

8 A. It is.

9 Q. And by the way, the photographs that we're
10 seeing here on this NIST standard, is this a -- a
11 fiber?

12 A. No. The -- both those, in my opinion, based on
13 the photographs, are bundles of fibers.

14 Q. And what is it about the photograph, the
15 appearance, that represents it as a bundle of fibers?

16 A. Well, it's kind of hard to see from this far
17 back, but on the bottom right-hand end, you'll see what
18 looks like almost little protrusions sticking out of
19 the bottom. If you can then see this under the
20 microscope, you can see the striations that these are
21 individual fibers all packed together. And that's the
22 definition of a bundle: parallel fibers that are
23 touching, not spread apart.

24 And the top one the same thing. This one's a
25 little different in that you can see one, two, three,

1 four, five, six, a number of individual fibers, and you
2 have one long one on the top right-hand side.

3 So these would be two bundles of tremolite
4 asbestos.

5 Q. And then the last page, on the NIST standard,
6 does it show the diffraction pattern or the selected
7 area electron diffraction image?

8 A. Yes.

9 Q. And we heard from Mr. Poye about this the other
10 day. But can you just remind us again. What are we
11 seeing in here and how do we know this is an amphibole
12 or asbestos based upon this diffraction pattern?

13 A. Well, nobody -- at least we don't -- just base
14 something on a diffraction pattern. We look at three
15 things: The morphology. Is it fibrous? Does it meet
16 the definition? Very important, the microchemistry.
17 Does it have a tremolite chemistry, the right ratios of
18 magnesium, the calcium, and the one tall silicon peak?
19 And does it have an amphibole-type d-spacing -- that's
20 the -- that's the distance between the row of atoms --
21 that are consistent with tremolite?

22 So it's not just one thing. Everything goes
23 through a series of diagnostic tests. You know, A,
24 yes. It has the right morphology. It's fibrous.
25 Check.

1 Second, the chemistry. Does the chemistry
2 match? And tremolite is very distinct. Check.

3 Does it have an amphibole diffraction spacing
4 between the atoms that are in the range of what you
5 would expect for tremolite which are off standard x-ray
6 cards for x-ray diffraction? Check.

7 And there it is.

8 You can't -- you just can't rely on one thing.
9 You put it all together and it says, yes, by all the
10 standards, this is tremolite asbestos.

11 Q. Now, if somebody were to say, Dr. Longo, wait a
12 second, you didn't measure the space and do what's
13 called a zone-axis measurement of this, so how can you
14 possibly know that's an amphibole pattern, because you
15 didn't measure it? Is that a fair criticism, in your
16 view?

17 A. Absolutely not.

18 Q. And why -- why do you say that?

19 A. You don't need a zone-axis diffraction pattern.
20 If all's you had was a diffraction pattern and no
21 chemistry to go along with it, then, yes, you need to
22 do at least one zone-axis diffraction, and you have --
23 and that's how microscopists would have done it in the
24 '70s and early '80s before EDXA or the microchemistry
25 got so good, for lack of a better word. So you don't

1 need that. It's not required in any of the standard
2 protocols to do that.

3 Q. Did George Yamate, years ago, 30 years ago,
4 suggest zone-axis measurements?

5 A. George Yamate said for EPA Level 3, and if it's
6 going to be a -- if it's going to be a legal case, you
7 need to do zone -- you need to do a couple zone-axis
8 diffraction patterns to verify.

9 Q. Now, I'm going to switch gears back to -- away
10 from the standard to the -- your testing, actually.

11 Do you -- do you employ the methods for the
12 identification of asbestos that have been recognized,
13 the International Standard Organization methods, the
14 other methods, for the proper identification of
15 asbestos?

16 A. Yes.

17 Q. And have -- did you employ -- you and your lab
18 employed those clearly-defined methods in the
19 identification, in the characterization of asbestos in
20 talc?

21 A. Yes, we did.

22 Q. Anywhere, in any of the methods that you
23 examined for the identification of asbestos in talc, is
24 there a requirement that you do what's called a, quote,
25 backscatter analysis?

1 A. No.

2 Q. If somebody were to come to this courtroom and
3 say, I'm state of the art, I use backscatter analysis
4 and I can determine there's no asbestos here because
5 the backscatter analysis that I use, is that in any
6 method whatsoever for the identification of asbestos?

7 A. No. That would not be, in my opinion, a -- a
8 method used to identify different types of asbestos.
9 That was not -- backscatter detectors and transmission
10 electron microscopes were never designed to do
11 irregular surfaces like asbestos fibers. It has to
12 be -- we did it in graduate school. It has to be a
13 polished surface so you can see all the different
14 orientations of the crystal. If it's round like
15 asbestos fiber or bundle, it is very difficult to
16 identify without numerous standards, and that's even in
17 the published papers about that.

18 So it's not recognized in any -- any agency as
19 a method for the identification of asbestos.

20 Q. So let's -- let's jump right into the -- these
21 books. You have binders over -- box -- two boxes of
22 binders next to you, do you not, Doctor?

23 A. Yes, sir.

24 Q. And within the -- the binders -- and these are
25 already admitted into evidence.

1 Just so the record is clear, I'm going to start
2 with the box that's got the J&J -- the box that J&J
3 tested.

4 A. Okay.

5 Q. Okay? And let's start --

6 By the way, did you and your laboratory look at
7 historical samples provided by J&J at J&J's lab over
8 the last several months, in the last year or so?

9 A. Probably the last year, yes.

10 Q. Let's take a step back before we get to these
11 real quick.

12 Originally a couple years ago, did you -- did I
13 provide you samples that I got from collectors -- from
14 one collector, and did other lawyers provide you
15 samples to look at that got -- purchased from eBay and
16 purchased -- or got from individual clients that had
17 claims, and did you analyze a whole bunch of J&J
18 products a couple years ago?

19 A. Yes.

20 THE COURT: Do you want to ask just one
21 question at a time.

22 MR. SATTERLEY: I'm sorry. I apologize,
23 Your Honor.

24 THE COURT: Go ahead. Just start over.

25 I don't know which one he answered there, but

1 go ahead.

2 THE WITNESS: Yes, yes, yes, and yes.

3 BY MR. SATTERLEY:

4 Q. Let me break it down.

5 A couple years ago, did I provide you three
6 samples?

7 A. Yes.

8 Q. Did I provide an affidavit from a collector?

9 A. Yes.

10 Q. Did you analyze those three samples that I
11 provided to you a couple years ago?

12 A. Yes.

13 Q. Did other attorneys from other law firms
14 provide you samples?

15 A. Yes.

16 Q. Did you -- some of those samples -- were some
17 of those samples that you understood were obtained off
18 eBay?

19 A. That is correct.

20 Q. And were -- some of those samples, did you
21 understand were obtained from individual clients that
22 had a claim against J&J?

23 A. Yes.

24 Q. Okay. And did you analyze all those samples in
25 2017, the fall of 2017?

1 A. Yes.

2 Q. And did you issue a written report with
3 photographs and -- and come to opinions and conclusions
4 about those -- those specific samples?

5 A. Yes.

6 Q. And were you examined by J&J lawyers in detail
7 about those samples?

8 A. A number of times.

9 Q. Okay. Did you do what's called a particle size
10 distribution to verify the particle size of the talc
11 and things in the samples?

12 A. Yes.

13 Q. All right. Did you -- subsequent to all that
14 work, the three samples I provided you, the eBay, the
15 clients, did we provide you samples that we got
16 directly from J&J?

17 A. Yes, sir.

18 Q. Okay. And before we got the samples from J&J,
19 directly from J&J, did J&J lawyers cross-examine you
20 and criticize you with regards to the samples that you
21 had off eBay?

22 A. Yes.

23 Q. Okay. Did they accuse of maybe -- or suggest
24 that the lawyers contaminated the samples?

25 A. Yes.

1 Q. Did they suggest maybe the samples were
2 contaminated in some -- by some other third party?

3 MR. CALFO: Your Honor, this is improper
4 direct.

5 THE COURT: May I see counsel at sidebar.

6 MR. SATTERLEY: In the interests of time, I'll
7 move on.

8 THE COURT: All right.

9 MR. SATTERLEY: Okay.

10 BY MR. SATTERLEY:

11 Q. Subsequent to -- to -- in the original analysis
12 you did, did you report, in your opinion, accurate
13 findings of all the asbestos you -- you found?

14 A. Yes, sir.

15 Q. And did you take photographs of them?

16 A. Yes.

17 Q. And did you take EDS of them?

18 A. We did.

19 Q. And did you take selected area electron
20 diffraction?

21 A. Yes, sir.

22 Q. All the backup data?

23 A. Yes.

24 Q. Okay. Now, subsequent to all that, did you
25 obtain directly from me or lawyers representing

1 individuals samples J&J provided from their historical
2 collection?

3 A. Yes, sir.

4 Q. Okay. And what we have in these binders -- do
5 you have in the binders results from some of the
6 historical samples that you've analyzed?

7 A. Yes, sir.

8 Q. And as a matter of fact, did Johnson & Johnson
9 also provide photographs and dates, if we go to the
10 1960s, the historical samples from the 1960s? This is
11 Exhibit 1080 in evidence.

12 So, for example, this one is a photograph of
13 one of the historical samples that your lab and
14 laboratory analyzed; correct?

15 A. Correct.

16 Q. And the way it worked was -- and you correct me
17 if I am wrong, but you -- your lab got just a very
18 small portion of each of the samples so that another
19 laboratory, a laboratory hired by Johnson & Johnson
20 lawyers, could look at those as well; correct?

21 A. That is correct.

22 Q. All right. And included in Exhibit 1080, do
23 you have -- you have photographs of your findings,
24 including photographs of PLM, TEM, and so forth?

25 A. Yes. Yes, that's correct.

1 Q. And do you have also the -- the EDS, the
2 chemistry, for example, the chemistry of what you
3 found?

4 A. Correct.

5 Q. Okay. And do you have the selected area
6 electron --

7 A. Yes.

8 Q. And so in the binder, Number 1080, are there
9 the identification -- photographs of the identification
10 of asbestos and fibrous talc in this binder?

11 A. Yes. The results are the photographs for both
12 the transmission electron microscopy as well as the
13 polarized light microscopy for positive samples,
14 typically using the Blount method for PLM.

15 Q. And many of the photographs, do they also --
16 the samples, have the date of the sample, according to
17 J&J? This was 1966 or '67, according to what they
18 provided to us?

19 A. Yes, sir.

20 Q. And let me just go through the record real
21 quick so that we have the record real clear.

22 The 1970s -- is that 1081 historical samples --
23 the photographs of the historical samples from the
24 1970s?

25 A. Yes.

1 Q. And did your lab and laboratory break the
2 samples down by sample numbers and have an M number,
3 M -- like, for example, M69042, is that a sample --
4 sample number that your lab analyzed?

5 A. Yeah. This would be our sample tracking
6 numbers, where -- when we log samples in, we go ahead
7 and give it a sample tracking number so that we can
8 keep track of it.

9 Q. And I'm going to come back to the '70s in a
10 little bit.

11 In the 1980s, did -- all the photographs of
12 asbestos that you found in the 1980s, is it
13 Exhibit 1082?

14 A. Yes, it is.

15 Q. And does it have -- are these true and accurate
16 photo- -- photographs of the -- of the asbestos
17 anthophyllite, tremolite, actinolite that you found --
18 you and your laboratory found in the Johnson's Baby
19 Powder in the 1980s?

20 A. Yes, sir.

21 Q. In the 1990s -- Exhibit 1083, does it have
22 photographs of nine different samples in the 1990s
23 where asbestos is identified, documented in -- in this
24 in this binder?

25 A. Yes, sir.

1 Q. And in the 2000s -- and this is going to be --
2 the 2000s, this is going to be Exhibit 1084. Are there
3 five different samples where photographs were taken
4 regarding the presence of tremolite and asbestos in the
5 2000s?

6 A. Yes.

7 Q. And did you -- have you also prepared and
8 provided to Johnson & Johnson a report on Chinese talc,
9 where you analyzed Chinese talc for the presence of
10 asbestos?

11 A. Yes, sir.

12 Q. And did you document asbestos from the Chinese
13 talc from Johnson's Baby Powder?

14 A. Yes.

15 Q. And the last binder is 1065. This is a
16 verification of Lee Poye's TEM analysis of J&J
17 historical Vermont Shower sample -- Shower to Shower
18 samples. And did you take photographs and verify the
19 presence of asbestos from Lee Poye's analysis?

20 A. Yes, we did.

21 Q. And he was here the other day, and he testified
22 that you and your lab verified 98 percent of asbestos
23 that he found in the Shower to Shower.

24 A. That is correct.

25 Q. Now, obviously, I'm not going to go through all

1 these pictures today. There are literally -- there's a
2 heck of a lot. So -- but I -- what I do want to do is
3 have you explain some things to us.

4 A. All right.

5 Q. And, for example, if you could go to the 19- --

6 Before I go to the 1960s, some of the samples
7 that you looked at, at the request of me and the other
8 lawyers, in 2017, were those samples going back into
9 the '50s and the '40s and the '30s, very old samples?

10 A. Yes, sir.

11 Q. Okay. And did -- did you document the asbestos
12 and take photographs of asbestos in those very old
13 samples?

14 A. I did.

15 Q. Okay. Now, the '60s -- if you could go to the
16 binders that's the '60s. And let's just pick out so we
17 can explain what PLM -- if you could tell me a tab
18 number that would explain what -- what PLM photographs
19 look like so we can talk about what you found.

20 A. Let's just go to Tab -- pick one here -- Tab 3.

21 Q. Tab 3. Okay. And we have page numbers at the
22 bottom.

23 A. That would be page 41.

24 Q. All right. So tell you what. I'm going to
25 take it out of the binder, make it easier for you.

1 There you go. It's hard to see because of the light.

2 MR. SATTERLEY: Your Honor, may I turn the
3 light off? Maybe -- I don't know if the reflection
4 will -- the front light here?

5 THE COURT: I don't think that's a reflection.

6 MR. SATTERLEY: Not going to work?

7 THE CLERK: I think it's the reflection from
8 the...

9 MR. SATTERLEY: It might be here, on...

10 Oh, there we go. That -- that helps out right
11 there. That helps out.

12 BY MR. SATTERLEY:

13 Q. Dr. Longo, what are we looking at?

14 A. This is a photomicrograph using polarized light
15 microscopy. And in this particular case, for this
16 sample here, the analyst identified this as
17 actinolite/tremolite.

18 Now, this is known as dispersion staining,
19 which is part of what happens in polarized light
20 microscopy. There is actually no staining involved.
21 It's just a matter of changing the characteristics of
22 the optical microscope, cutting the light down and
23 changing the F-stop.

24 And so what we're looking at is light being
25 refracted around the bundle under dispersion staining.

1 And because of the color of that light being refracted
2 around the fiber under -- under polarized light, it
3 gives you a certain color.

4 And that color there, you would say is sort of
5 yellowish-golden, and it's parallel to the light, so
6 that the light is coming in one direction, parallel to
7 it. And when it refracts around the bundle, it will
8 refract in this light -- in this -- they call it a
9 vibration, but it's actually the wavelength of light.

10 And the analyst will say, "Okay. That is a
11 goldish -- that is a yellowish-gold," and has a chart
12 that they look up and say, "Okay. At this color, it's
13 going to be this refractive indices," meaning 1.62 or
14 1.61.

15 And then he'll -- go to the next one. He'll go
16 to the perpendicular direction.

17 Q. The next slide?

18 A. The next slide.

19 Q. All right. So -- so this -- before --

20 A. That's -- you're putting a purple one on there.

21 That's not the next side. Turn it up --

22 Q. Oh, this way. Double-sided.

23 A. Turn -- turn the one you have upside down.

24 Q. Oh. All right.

25 A. Now, that is that -- that is the exact same

1 bundle. He's now rotated it so the light is going
2 through at a different direction, and you'll get a
3 darker reddish color there. And then he can do the
4 refractive indices, and say, "This is in the range of
5 actinolite/tremolite."

6 These analysts that I have -- this particular
7 person has been doing this for almost 30 years. He's a
8 geologist, trained at McCrone, or Walter McCrone's
9 group, back 30 years ago to do this. All our analysts
10 were trained by Walter McCrone many, many, many years
11 ago, because that's what they -- what he did, and this
12 is how -- the protocol.

13 So they look at this, and then they have some
14 other stuff that they do. Extinction angle. If you
15 keep turning it to some point, the light refracted
16 through the material will be the same as the light
17 around the material on a particular angle. So it
18 disappears. And when it disappears, they call it the
19 extinction angle.

20 And so tremolite and actinolite, if you turn it
21 slightly oblique, start going this way, it just fades
22 out. They'll go, "Okay. That's indicative of
23 tremolite/actinolite."

24 Then the refractive indices -- and then they --
25 and everybody likes the next one because it's such a

1 pretty color. It's called elongation. Now you can put
2 the purple up.

3 Q. Before I get the purple one out, let me just
4 ask a couple questions.

5 It says, "actinolite/tremolite." You -- and
6 you described this as bundles.

7 A. Yeah. Go back to the previous one.

8 Q. Well, I mean, why -- why can't -- why can't
9 this just be a cleavage fragment? This is a cleavage
10 fragment, Dr. Longo, isn't it?

11 A. No. No, it's not.

12 Q. Why not?

13 A. If you -- you can't quite see it from there.
14 If you look at it, you can see striations in the bundle
15 itself. I don't know if you can -- you actually see
16 lines going through it. It's hard to see on this one.
17 We'll get a better -- just because you're blowing it
18 up.

19 So it's difficult to see here, just because
20 you're blowing it up, but it actually has striations
21 going through it that make up this.

22 And it's large. This is 88.5 micrometers in
23 length. If you want to know the aspect ratio, you
24 don't measure the whole bundle. The protocol tells you
25 to measure the individual fibers.

1 And I know it's hard to see it. We might have
2 a better example, because it's bigger than this one.

3 So the aspect ratios on here are all running
4 about -- in this particular one between 160- and
5 200-to-1 aspect ratio. This is a bundle. This is not
6 a cleavage fragment.

7 And it's meeting the counting protocols for
8 aspect ratios greater than 5 to 1, individual fibers,
9 and, therefore, is a regulated asbestos bundle.

10 Q. The purple one that you -- this page 43 --

11 A. This is called elongation. When you turn it in
12 this direction -- you have to put another filter in
13 there. It's a 530-nanometer filter that, again,
14 changes the vibration of the light, gives you these
15 beautiful colors.

16 But it tells you how fast the light goes
17 through the crystal via the orientation, either this
18 way or that way. And if you switch it the other way,
19 it changes colors, and these particular colors will
20 tell you what type of asbestos this is.

21 So it's a very involved analysis.

22 Q. And is it your opinion that this is --

23 Let's zoom it back out.

24 -- tremolite?

25 A. Well, it's actinolite/tremolite. We don't

1 differentiate between actinolite and tremolite. You
2 have to --

3 Q. Under PLM?

4 A. Under PLM, because you have to go to another
5 RI, refractive indices, fluid.

6 And since both of those are regulated asbestos,
7 tremolite and/or actinolite, and actinolite is part of
8 the whole solid solution series of tremolite --
9 meaning, eons ago, when it all formed, what -- if there
10 was a little bit more iron present, you could get more
11 on the actinolite side; if there's less iron, you get
12 more on the tremolite side.

13 Since it's regulated, we don't go the extra
14 step.

15 Q. So on this particular one, this has got
16 M68503-009; right?

17 A. Right. And it has -- you can see the "BL" on
18 there. That means that was the Blount -- this is a
19 Blount PLM.

20 Q. You used the Blount method?

21 A. Yes, sir.

22 Q. Under the -- the same number, M68503-009, we
23 have a TEM photograph. That's going to be on page 50
24 of this exhibit. And explain what this represents.

25 A. This is a tremolite -- it's either a fiber or a

1 bundle. I would have to be sitting at the microscope
2 so I could adjust the focal plane and go in higher
3 magnification to tell you if it was either a fiber or a
4 bundle.

5 But it -- either way, it's still a regulated
6 asbestos structure, meeting the counting rules. In --
7 in this particular case, it's tremolite.

8 Q. And do you include with this in your report --
9 it's part of exhibit -- the exhibit here, the chemistry
10 and the selected area electron diffraction?

11 A. Yes.

12 Q. And throughout these binders, you do that with
13 regards to the photographs, provide for the TEM, the
14 selected area electron diffraction and EDS?

15 A. Yes.

16 Q. If we go to Tab 4, I want to ask you about
17 page 59 and 60. And page 59 has the pretty purple with
18 the blue. There is an arrow right here, and it says
19 "actinolite/tremolite elongation."

20 A. Yes.

21 Q. Is this another example of asbestos fibers
22 documented by the PLM method?

23 A. Yes. And if you go to page 57, it's that same
24 asbestos bundle. And you can see the striations a
25 little bit easier on page 57.

1 Q. 57?

2 A. You just had it in your hand.

3 Q. This one right here?

4 A. Yes. I don't know if you can see it -- my
5 glasses are -- need a new prescription -- but if you
6 look at that closely on the ends you can actually see
7 individual fibers on each end of that bundle.

8 Q. Oh, I see. It's a different magnification,
9 then; right?

10 A. That's at a hundred times. There you go.

11 Now, see on the very -- on each end, you can
12 see what looks like little fibers protruding out of
13 that, that's a classic bundle.

14 Q. I got it upside down.

15 A. Now that you have turned it right side up, it's
16 still a bundle.

17 Q. It's still a bundle.

18 A. So that's almost 70 micrometers long, and if
19 you take one of those little fibers in there for the
20 width, because that's how you determine the aspect
21 ratio on the PLM, you easily have something that's
22 200 to 1 or greater for your aspect ratio in that.

23 And interesting, TEM, even though we have
24 positive TEM samples for this same thing, you never see
25 these large bundles. Every microscopist in the country

1 understands that TEM is biased against these very large
2 bundles. And we don't know why. It gets caught up in
3 the sample prep, because everything you see is smaller
4 than that in TEM. Even though TEM is more sensitive.

5 So there is room for both analysis here, the
6 large stuff and the smaller asbestos stuff, using these
7 two different techniques.

8 Q. Did you find asbestos in samples -- in many of
9 the samples from the '70s as well?

10 A. Yes, sir.

11 Q. And what about the '80s?

12 A. Yes, sir.

13 Q. And what about the '90s?

14 A. Yes.

15 Q. And let's go up to the binder that's listed as
16 the '80s. Exhibit 1082.

17 And, once again, the photographs with the
18 numbers are on there; correct?

19 A. That is correct.

20 Q. So, for example, this one right here, we look
21 and zoom in, it says "1985" on it, I think, on the
22 bottle -- the actual bottle itself. J&J BPC1985;
23 right?

24 A. That is correct.

25 Q. If you could, just in the '80s, give us a

1 representative sample -- well, let me -- let me pick
2 one out because I don't know what I'm looking at here.

3 Let's look at Tab 2, page 14. It's upside down
4 again. Oh, now it's upside down. I don't know how to
5 use this thing.

6 Anyway, Dr. Longo, what's represented here?

7 A. This is another tremolite/actinolite bundle,
8 and this is again under elongation, so it's measuring
9 the speed of the light through the -- essentially the
10 crystalline fiber.

11 This is at a magnification of 200 times, and
12 it's showing you some of the striations of the
13 individual fibers that you can see if you go back to
14 page 13, which would be the other side of what you
15 have.

16 And this is under dispersion staining. And it
17 shows you under a hundred X that -- and, again,
18 dispersion staining one goes around the bundle, so you
19 see more what's happening on the edges. It again shows
20 individual fibers.

21 And this is a bundle that's 64 micrometers --
22 63.4 micrometers in length. So these are all large
23 bundles that we're finding by the Blount PLM method.

24 Q. And if we flip over to page 16, I see that this
25 is marked anthophyllite on part of the structure -- or

1 part of the bundle and talc on another part of the
2 bundle. Explain that.

3 A. Well, it's either a transitional but more
4 likely what we're looking at here is the anthophyllite
5 bundling on a particle of talc, because the
6 anthophyllite is all the way from one end to the other.
7 When you have these transitional anthophyllite talc
8 fibers, you'll see that it's almost growing, looks like
9 one is growing inside the other. But here we have it
10 on the edge, and what we have next to it looks like a
11 talc -- under a talc plate. So we see this sometimes
12 where you have an asbestos fiber sitting on or under a
13 talc plate.

14 Q. And then, if we go over to 17, page 17, we have
15 talc and anthophyllite right next to each other.
16 Bundles of both; correct?

17 A. It's either bundles or a small plate. And
18 here's one of the ways you can tell the difference
19 between asbestos and talc. The very thick portion of
20 the talc plate, the colors aren't similar, and then
21 between where we have the talc in the anthophyllite
22 bundle, it's almost a darkish bluish color, and that
23 tells you that is not anthophyllite.

24 So we -- and then we have that one bundle
25 anthophyllite. And, again, I believe it's laying on

1 top of the talc particle.

2 Q. Then we go to page 19. We have anthophyllite
3 bundle crossed polar. What's that mean?

4 A. The optical -- the polarized light microscope
5 has two polarizing lens, one on the bottom and one on
6 the top. And polarized light is like polarized
7 sunglasses. It causes -- the light is scattering
8 everywhere and it grabs the light and that only is
9 going in one direction. That's why you don't get the
10 glare and stuff when you used polarized light
11 microscopes. You can -- if you fish, you can see the
12 fish better.

13 Now, if you got two of them, you can change the
14 direction pretty drastically and get another direction
15 in there. So in crossed polars, we have the polars
16 turned crossways to each other. And so now we're
17 seeing just the anthophyllite portion where the arrow
18 is. Everything else you see there that we are looking
19 at that talc plate is talc. And you can see that is
20 definitely a different color. And you can also see
21 some of the individual striations there.

22 Q. And do you include in the photographs, the TEM
23 photographs from the same sample? For example, Tab 2,
24 does it have both TEM photographs as well as
25 PLM photographs?

1 A. Yes, sir.

2 Q. In the interests of time, I'm not going to go
3 through every decade or every -- but are there
4 confirmed photographic evidence of asbestos in the
5 '60s, '70s, '80s, '90s, and 2000s?

6 A. Yes, sir.

7 Q. Any question in your mind regarding that?

8 A. No, none whatsoever.

9 Q. Have you confirmed, in your opinion, what has
10 been documented in the documentary evidence of what we
11 went over earlier about Johnson & Johnson Baby Powder?

12 MR. CALFO: Objection, no foundation. Calls
13 for speculation on the part of this witness.

14 THE COURT: That's overruled.

15 THE WITNESS: I'm sorry. Could you repeat it.

16 BY MR. SATTERLEY:

17 Q. Yeah. Have you, in your opinion, confirmed and
18 taken photographs of the presence of asbestos in
19 Johnson & Johnson Baby Powder that were -- was
20 documented in the documents we went over this morning?

21 A. Yes.

22 Q. Back in -- historical?

23 A. Yes. We -- finding the same thing.

24 Q. With regards to -- we don't have your reports
25 in here, just the photographs, but do you have the

1 reports, your reports, with you?

2 A. Yes, sir, I do.

3 Q. And, with regards to the Johnson & Johnson Baby
4 Powder, the -- what percentage of positives did you
5 find, meaning what percentage had asbestos in them?

6 A. For the 72 samples, what I call historical,
7 57 containers and 15 railroad car samples, we had an
8 overall total positive of approximately 68 percent of
9 the 72 we analyzed.

10 Q. So does that mean, Dr. Longo, that if 68
11 percent was positive, that means 30 -- was 32 percent
12 there's no asbestos there, in any of those bottles?

13 A. No. Doesn't mean that.

14 Q. Well, why not? Why not?

15 A. It means --

16 MR. CALFO: Objection, Your Honor. This calls
17 for speculation. There's no asbestos.

18 THE COURT: That's overruled.

19 THE WITNESS: Well, it's just below your
20 detection limit. So at some point all's you can say
21 is, it's below our detection limit, we can't verify if
22 it's there, and we can't verify. And nobody can ever
23 say, it's pure and it's not there, because you can't
24 get to that low of detection limit. All's you can say
25 is nondetect. We can't verify it's there or not there.

1 BY MR. SATTERLEY:

2 Q. How many fibers would have to be there in order
3 for you to even detect it in the method that you're
4 using?

5 A. Right now we have our detection limit that we
6 used here, and I'm just going to scan through the
7 report real quick. We've gotten our detection limit
8 down for these analysis to 3,000 asbestos fibers or
9 bundles per gram of talc. So we have to have at least
10 that many there, in one sample. Then most of them are
11 5 and 6,000 fibers or bundles of asbestos per gram.

12 So think of it as this: If my detection limit
13 is 6,000, that means I have to find -- for me to find
14 one fiber, it has to be at least 6,000 fibers and
15 bundles per gram of cosmetic talc to find one. Because
16 it's spread out through there.

17 Q. And have you -- have you done the calculation
18 with regard to the 7024 with regards to how many
19 asbestos fibers would need to be there per gram under
20 their method?

21 A. Approximately 14 million for one fiber to be
22 there using --

23 Q. For one fiber?

24 A. To be using that method.

25 Q. But wait a second. Their -- their method says

1 they have as many as 20 or 5 fibers of any -- of each
2 variety; right?

3 A. Correct.

4 Q. So you're saying 14 million for one fiber, so
5 how many asbestos fibers could be present under the
6 7024 method and still qualify as nonquantifiable?

7 A. It works out to be about 6' -- well, you take
8 four fibers, it's around 58 million before you -- you'd
9 have to have one more fiber to get that fifth fiber
10 before you would say, yes, it has asbestos in it.

11 If you only had four tremolites, that would
12 work out to a little bit over 50 million asbestos
13 fibers or bundle per gram to find one, because the
14 detection limit is so bad in that protocol.

15 Q. And if you had -- had to find four or five of
16 the same of each variety, so you could have -- you
17 could have four tremolite, four anthophyllite, four
18 actinolite, and four chrysotile and still call it
19 nonquantifiable, what number are we talking about
20 asbestos fibers present and still be able to say it's
21 nonquantifiable?

22 A. A little bit over 200 million fibers and
23 bundles per gram.

24 Q. I apologize.

25 All right. Now let me switch gears and talk

1 with you about Colgate, Colgate testing. And Cashmere
2 Bouquet. Last year, at the request of other attorneys,
3 did you analyze 3 -- or did you analyze 38 samples of
4 Cashmere Bouquet?

5 A. Yes.

6 Q. And did you take photographs and document what
7 your laboratory found in tab, what's called Appendix A,
8 Appendix B, and Appendix C?

9 A. Correct.

10 Q. And we marked as Appendix A -- it's into
11 evidence, I should say, as 1091, photographs from
12 Appendix A.

13 And what does that represent?

14 A. Appendix A is the samples that we received from
15 the law firm of Simon Greenstone.

16 Q. And did you document a photograph of the
17 containers, photograph of the analysis? Did you
18 photograph what was identified?

19 A. Yes, sir. But to be fair, to be included in
20 that, we videotaped the opening up of the seal,
21 Cashmere Bouquet face powder samples that we got.

22 Q. These were sealed?

23 A. Not all of them. But 20 out of these 25 were
24 sealed with the manufacturer's sort of a paper-type
25 covering over than the entire area. Underneath it

1 would be the talcum powder. Sort of a -- they're round
2 and they were all still sealed.

3 Q. Now, I want to -- I'm not going to go through
4 all the photographs in Appendix A, but I want to go
5 through a few of them just so that we can understand
6 what they represent. And I'm just going to randomly
7 pick. If you go to sample, under Tab 12, which is
8 M68072. If you go to -- it's page 220.

9 A. Okay.

10 Q. What are we seeing here in the Cashmere
11 Bouquet, one of the samples?

12 A. I'm sorry. What page are you on?

13 Q. 220. It's got a number, M68072.

14 A. That is a -- it looks like -- if I were to pick
15 that -- let me see if I can find it. All right. Hold
16 on. That would be a tremolite/actinolite bundle for
17 001003. Oh, I'm sorry. We're on -- I'm on the wrong
18 one. You said 220; right?

19 Q. Yeah. 220.

20 A. That would be Number 4 out of that sample.
21 That is a crushed tremolite/actinolite bundle. When I
22 say "crushed," looking at it, it looks like, because
23 this material is milled, meaning it's all ground up to
24 make a certain size, it looks like that was pushed down
25 and caused that bundle to spread apart instead of

1 saying that's three bundles.

2 So that's a tremolite/actinolite. Very large
3 bundle.

4 Q. And if we flip over to this, what does this
5 represent? This is page 219. Immediately pre --

6 A. This is under crossed polars, and this one is a
7 really good example on how you can see some of the
8 individual fibers that are consistent with what a
9 bundle should be. And they're all going in the same
10 direction, and you can see these individual fibers that
11 make up this bundle. At these magnifications this
12 bundle is approximately about 200 to 250 micrometers in
13 length.

14 So think of it as on a TEM grid. I don't know
15 if Lee Poye showed what TEM grids look like, but this
16 would cover two TEM grids -- openings.

17 Q. And let's see. And just so if we can get a --
18 if you can flip to Tab 3. You document a photograph,
19 the container, this is the Cashmere Bouquet face powder
20 in the way it came to you?

21 A. Yes. This was another sealed container, which
22 we videoed when we opened them to have it documented
23 that it was sealed.

24 Q. If you flip over to page 71 of this same
25 sample, it says "elongation," and it's got that pink,

1 and it's got a blue -- once again, what does that
2 represent?

3 A. That's most likely a talc fiber. It's not
4 asbestos. No asbestos was found for the PLM in this
5 particular sample. Only the TEM.

6 Q. So, in this particular sample, we go over to
7 the TEM, was tremolite asbestos found in this Cashmere
8 Bouquet product?

9 A. Yes.

10 Q. Is that a photograph -- this is page 76 there,
11 sir.

12 A. Yes. That's a photograph of an asbestos
13 tremolite structure.

14 Q. And do you include in this the chemistry and
15 SAED?

16 A. Yeah. If you go to the very next page,
17 page 77, you can see the chemistry -- the magnesium,
18 the silicon, and the calcium peak -- which, if you
19 remember, looks identical to the NIST standard,
20 National Institutes of Science and Technology. What
21 they say is tremolite asbestos. So it's a perfect
22 match.

23 Q. Well, let me -- why isn't that a cleavage
24 fragment, Dr. Longo? Why isn't that just a cleavage
25 fragment and not asbestos?

1 A. Well, by all the counting rules in TEM, this is
2 regulated asbestos. It has the appropriate chemistry,
3 appropriate diffraction pattern for the d-spacings. It
4 has the appropriate morphology greater than -- greater
5 than or equal to 5 micrometers in length. This is
6 3.8 micrometers in length. Has to have an aspect ratio
7 of at least 5 to 1 or greater. It matches that. And
8 in this particular case, again, it's on -- just looking
9 at the results here, that would be -- and, again, I
10 would have to be sitting at the microscope to change
11 the focus, but it looks very close to being a bundle
12 just on this two-dimensional plane because of the back
13 end of it has those little bumps. Let's see what the
14 microscopist said.

15 Q. Are you talking about down here, the box down
16 here?

17 A. The microscopist called it a fiber. And that
18 would be the best position because you can change the
19 focal plane.

20 Q. Is it difficult sometimes where there's a
21 photograph like this on calling something a fiber
22 versus a bundle when it's a close call?

23 A. Yes and no. It's difficult if you're just
24 looking at a two-dimensional photograph sitting here,
25 because you're not sitting at the microscope. If

1 you're at the microscope and that is your -- and you
2 even said you got to distinguish fibers and bundles,
3 it's a lot easier because you can change the focal
4 plane, you can change the contrast, and the microscope
5 has a little gizmo you can flip in and increase the
6 magnification by ten times. So --

7 Q. "Gizmo," is that a technical term?

8 A. It is. If you ever worked in a lab, you'd call
9 it a "gizmo."

10 Q. So --

11 A. It's actually binoculars that you can put in
12 and open up a -- open up a small screen so you can
13 focus in on it.

14 Q. In the Cashmere Bouquet, of the 38 samples --
15 and this is just A. We've got B, Appendix B. Is that
16 another -- this 1092, and that is photographic evidence
17 of the samples and the results and the asbestos that
18 was identified; correct?

19 A. Yes, sir.

20 Q. And was this sent to you by -- these five
21 samples sent to you by a different law firm?

22 A. Levy Konigsberg in New York.

23 Q. And then Appendix C, was this -- this is
24 Exhibit 1093 -- these eight additional Cashmere Bouquet
25 products that you analyzed, your laboratory analyzed,

1 took photographs of for the presence of asbestos?

2 A. That is correct.

3 Q. And is there a total of 38 that's a part of
4 this report from last fall?

5 A. Yes, sir.

6 Q. And of the 38 samples -- this is going to be
7 Appendix C of the 38 samples -- how many did you find
8 asbestos in?

9 A. 30 of 38.

10 Q. On Appendix C, 1093, the last one, Tab 8, does
11 that include Cashmere Bouquet, it came in this
12 container?

13 A. Yes, sir.

14 Q. And this is page 337 of the photographs here.
15 Is that tremolite asbestos, sir?

16 A. 337?

17 Q. Yes, sir.

18 A. I'm sorry. What appendix?

19 Q. Appendix C.

20 A. Oh.

21 Q. September of 2018. Page --

22 A. Yes, that's tremolite there. All the way to
23 the back.

24 Q. The very last sample.

25 A. Yes. That would be a tremolite structure that

1 is laying on top of the -- one of the TEM grids. You
2 can see on the left-hand side how you have the little
3 right angle area, dark?

4 Q. Right here?

5 A. Yes.

6 Q. This is -- this is the grid -- the edge of the
7 grid here?

8 A. Correct. So that structure is laying on --
9 over the grid.

10 Q. Is -- so this is described as 4.2 microns in
11 length and 0.4 microns in diameter.

12 Is the fact that it's -- the grid -- it's going
13 underneath the grid, I guess?

14 A. Over the grid.

15 Q. Over the grid?

16 A. Yes.

17 Q. Does that mean that it could be much longer
18 than that, you just can't tell?

19 A. That's correct. You could only -- the rules
20 only allow you to measure the length from where the
21 grid ends and the fiber or bundle starts.

22 Q. And does the chemistry and the diffraction
23 pattern match up with regards to the rules, all the
24 methods, in calling this asbestos?

25 A. Yes, it does.

1 Q. Now, if somebody were to come into this
2 courtroom and sa, no, no, no, Dr. Longo has got it
3 wrong, that's a cleavage fragment, under the -- under
4 the rules of identifying asbestos set forth by these
5 various methods you've been telling us about, would
6 that be -- would that be accurate?

7 A. No. It has very specific regulated --
8 health-regulated rules, and this is what you have to
9 count. You have to follow the protocol. If you use a
10 certain type of protocol -- and these are in all the
11 protocols for these rules for TEM -- you have to follow
12 them.

13 Q. Now I'm going to switch and go to the
14 20 samples that I requested to your analyst, Zach, go
15 and pick up from RJ Lee, J&J and Colgate's experts.

16 A. Okay.

17 Q. The actual quantity of samples was more than
18 20; correct?

19 A. Yes.

20 Q. At the time of your report in this case, had
21 your laboratory analyzed 20 of those samples?

22 A. Yes.

23 Q. And have we marked the chain of custody for
24 those as 1096?

25 A. I'm looking for them.

1 Q. It's a -- the skinny binder.

2 A. Yes. Thank you.

3 Q. And if we look at the first three, just the
4 photographs -- this is going to be on page 11 -- we see
5 what the container looks like for the first three;
6 right?

7 A. Yes.

8 Q. And they're dated according to what RJ Lee and
9 Colgate has provided to you; correct? The '70, '70,
10 '73 to '77?

11 A. Yes.

12 Q. And if we look at the next three, did you --
13 did you and your laboratory just pick the first 20?

14 A. Yes.

15 Q. And was there problems with a couple of those
16 so you had to extend to 22?

17 A. There was.

18 Q. And tell us what the problem was.

19 A. They were in methanol. They weren't --

20 Q. What's --

21 A. They weren't in a powder. The sample bottles
22 had alcohol in them, methanol, which is a form of
23 alcohol, mixed with it, so we didn't want to analyze
24 those since they weren't starting with just the talcum
25 powder. It's different, you know, the protocol, so we

1 just extended it to 22 and did not analyze the ones in
2 methanol.

3 Q. So the -- into evidence the jury can take a
4 look at the photographs of the various containers of
5 the Cashmere Bouquet that goes along with the chain of
6 custody; correct?

7 A. Correct. Now, we didn't receive the
8 containers; we just received samples from the
9 containers.

10 Q. RJ Lee, the laboratory for Colgate, was the one
11 you guys had to actually go to Pittsburgh, Zach had to
12 go to Pittsburgh, to pick these up?

13 A. Yes, sir.

14 Q. In Appendix B do you have the results of the --
15 PLM results for these Colgate -- these Colgate samples?

16 A. Yes, sir.

17 Q. And I have Appendix B having 15 different --
18 excuse me -- 17 different samples. Was there 16 or 17
19 that was positive by PLM?

20 A. Let me get the report, because I don't want
21 to -- for these 20 samples just to make sure.

22 THE COURT: While he's looking for that,
23 Mr. Satterley, you referred to this as "Appendix B."
24 What -- what is the --

25 MR. SATTERLEY: To his report.

1 THE COURT: What is the exhibit number?

2 MR. SATTERLEY: Oh, I apologize. 1097.

3 THE COURT: All right. So that's -- that's
4 1097?

5 MR. SATTERLEY: Yes, Your Honor. 1097.

6 BY MR. SATTERLEY:

7 Q. And, Dr. Longo, let me see if I can help you
8 out with regards to -- the first -- if we go to Tab 1,
9 the first group of photographs relate to a talc bundle.

10 A. Yeah. The first set of photographs, there was
11 16 positives by PLM --

12 Q. Okay.

13 A. -- and this one was not one of them --

14 Q. Okay.

15 A. -- the very first one.

16 Q. So -- and we'll get to the TEM in a little bit.
17 So 16 of the 20 by PLM had asbestos in them, in
18 your opinion?

19 A. Yes, sir.

20 Q. And did you document that and photograph it and
21 produce it as a report so Colgate could take a look at
22 that?

23 A. Yes, sir, I did.

24 Q. And -- and once -- since I've got this up here,
25 this is page 4 of 1097. How do you know that's a talc

1 fiber bundle?

2 A. Well, that's -- that's in elongation, but if
3 you go to -- if you go to page 2 --

4 Q. Oh, page 2.

5 A. Now, these samples had lots of other stuff in
6 it, but if you look where that is, where the talc fiber
7 is, you'll notice that from the other ones we looked at
8 and were more yellowish-gold than in this particular
9 case, in parallel, parallel dispersion, dispersion
10 staining, alls you get is this new blue color, this
11 nice bluish color.

12 That tells you it is -- it is talc for these
13 types of samples, as well as the other information that
14 we gleaned from the crystalline analysis by polarized
15 light microscopy.

16 Q. Dr. Longo, has J&J counsel in the past accused
17 you of misidentifying things as asbestos?

18 A. Yes, sir.

19 Q. Okay. Well, why didn't you just identify this
20 as asbestos and say, "This is asbestos," instead of
21 talc?

22 A. Because it's not. That wouldn't be right.

23 MR. CALFO: Your Honor, I object. Vague and
24 ambiguous as to "this." Is it a photograph?

25 MR. SATTERLEY: Yeah, the photograph. That's

1 what we're talking about.

2 MR. CALFO: I thought that was Colgate.

3 BY MR. SATTERLEY:

4 Q. Whether it's Colgate or Johnson & Johnson --

5 THE COURT: Well, it's --

6 BY MR. SATTERLEY:

7 Q. -- my question is --

8 THE COURT: It's 18 minutes of 3:00. We are
9 going to take our afternoon recess and come back in 15
10 minutes.

11 Ladies and gentlemen of the jury, it is your
12 duty as jurors not to converse amongst yourselves or
13 with anyone else on any subject connected with the
14 trial or to form or express any opinion thereon until
15 the matter is submitted to you.

16 I'll see you back in 15 minutes.

17 (Whereupon, the following proceedings were held
18 outside the presence of the jury:)

19 THE COURT: All right. It appears that all of
20 the jurors have departed from the courtroom.

21 Is there anything we need to put on the record
22 before we go on break?

23 MR. SATTERLEY: Your Honor, the only thing is
24 that I understand Your Honor made rulings sometime
25 today with regard to certain documents. We would just

1 like to incorporate those documents into evidence
2 regarding -- some J&J documents.

3 And then at some point, we need to address the
4 few remaining objections to the Scala exhibits. And I
5 don't know if Your Honor wants to do it at the end of
6 the day or tomorrow morning or whenever Your Honor --

7 THE COURT: I'm happy to do it at the end of
8 the day. We'll send the jury home at 4:30.

9 MR. SATTERLEY: That's fine, Your Honor.

10 THE COURT: Okay. Anything else?

11 We are in recess.

12 MR. SATTERLEY: Yes, Your Honor.

13 MR. GARY SHARP: Thank you, Your Honor.

14 (Recess taken.)

15 (Whereupon, the jury having entered the
16 courtroom, the following proceedings were held:)

17 THE COURT: Okay. The record reflects that all
18 the jurors are present in their appointed seats,
19 counsel are at counsel table, and we're ready to
20 proceed.

21 Go ahead, Mr. Satterley.

22 MR. SATTERLEY: Thank you, Your Honor.

23 BY MR. SATTERLEY:

24 Q. We were talking about Cashmere Bouquet and
25 specifically about 1097, the PLM results, and I was

1 asking specifically about some of the photographs.

2 If we can go to the very first -- or the second
3 sample, I'm going to ask you about this. We have
4 anthophyllite and then a talc plate here and then talc
5 at the other end?

6 A. Yes, sir.

7 Q. Explain that.

8 A. Well, that's called the intergrowth or
9 transitional. So you have anthophyllite as well as
10 talc. So when it was formed, you get two different
11 minerals, essentially, on one fiber, or bundle here in
12 this case.

13 Q. I saw that in this -- these pictures, to me --
14 and you can correct me if I am wrong -- there appears
15 to be several photographs. Is this a photograph of the
16 same structure that we just looked at?

17 A. Yes, sir. It's under crossed polars, and it's
18 at a magnification -- a higher magnification of 200 --
19 400 times. The other one was 100.

20 And this just shows the -- so this is at 400
21 under crossed polars, and you can see that it has fiber
22 structures that go all the way through. So it's known
23 as an intergrowth. So it's -- it's not only
24 anthophyllite, but it has some fibrous talc associated
25 with it.

1 Q. Is this, the next page, page 11, the same fiber
2 that is being analyzed with -- it's got a different
3 color background. Is that the same?

4 A. Yes, sir. This has no filters. It's not under
5 dispersion staining. It's not an image in that
6 530-nanometer plate. It's just under crossed --
7 crossed polars.

8 So you're seeing the talc plate that it's
9 laying on. And this may be, in fact, actually other
10 asbestos fibers laying on top of it, but it's too small
11 for us to resolve and -- and adequately identify on
12 that plate. It has anthophyllite on one end and talc
13 on the other.

14 Q. And the reason why I asked this question is,
15 we, or maybe the jury, when they look through these
16 photographs when they're evaluating this case -- there
17 would be several photographs that appear to be the same
18 structure but different colors and different
19 backgrounds. That's just different ways in which
20 you're looking at it under the microscope?

21 A. Yes, different wavelengths, a lot of which will
22 give you different colors. Some of them -- and you
23 have to just remember to take a look at what the
24 magnifications are. Same fiber, but it's bigger, it's
25 typically at a higher magnification. So smaller ones

1 are anywhere from 100 to 200, and then you'll also have
2 up to 400.

3 Q. And then this one, for example, this one is on
4 page 12. It looks like it's -- it's going this
5 direction, and this one, it's going this direction. Is
6 that the same situation, it's perpendicular?

7 A. Yes. It's on a stage that you can rotate. So
8 here, we have parallel dispersion, and then here, we
9 have perpendicular dispersion. And since you're
10 changing it, the fiber -- or bundle here, to the
11 direction of the light under dispersion staining, the
12 vibrations that come through change and give you
13 different -- these different colors that then they can
14 then match to the refractive indices, which then will
15 put it in either tremolite, actinolite, anthophyllite,
16 or if there was some other type of asbestos present.

17 Q. The Colgate lawyer wanted me to point that you
18 had gone to another sample, M69934. This is yet
19 another sample with asbestos in it; correct?

20 A. Yes, sir.

21 Q. And I wanted to ask about this. It says,
22 "Elongation at 400 magnification, tremolite."

23 Is this asbestos, Dr. Longo?

24 A. Yes, sir. You're -- we're looking at, again,
25 the exact same structure, higher magnification, under a

1 different type of filter, giving you this color.

2 Q. And do we have, once again, over here, page --
3 two pages over, page 31, exact same structure?

4 A. Oh, you -- you've moved on me.

5 Q. I'm sorry. Page --

6 A. Now we're on -- now we're on Sample 5.

7 Q. Yeah. Sorry.

8 Page 29 and page 30 and page 31, are those all
9 the -- of Exhibit 1097, all the same structure under
10 the microscope?

11 THE COURT: Well, before -- let him answer the
12 question over again as posed. He was still on the last
13 sample.

14 MR. SATTERLEY: I apologize, Your Honor.

15 THE COURT: Because I'm confused. And I
16 don't -- and maybe nobody else is, but I'm confused.

17 So what -- so what is that?

18 THE WITNESS: That's actinolite/tremolite. But
19 let's just start from the beginning of this one so
20 people can look at it and -- and understand what
21 it's -- what's going on.

22 So this is -- and we're starting on page --

23 BY MR. SATTERLEY:

24 Q. 22?

25 A. -- 20 -- 22 now. Now, you've gone to something

1 different.

2 Q. I'm sorry. I was moving too fast.

3 All right. Do you want to go to a different
4 one?

5 A. Let's start from the beginning. So move it up
6 so we can see the -- see the numbers underneath, the
7 actual title of this. Just move the whole thing
8 straight up.

9 Okay. There you go.

10 That identifies what we found in this
11 particular case, going from right to left at the
12 bottom. This was done by the International Standards
13 Organization, polarized light microscopy. No heavy
14 liquid density separation was done. The sample number
15 is M69934-005ISO, and this would be the first structure
16 found under this method.

17 So now we're starting. So this is under
18 dispersion staining, and you can see we have a lot of
19 stuff in here. And then over to the upper right, you
20 see the actinolite/tremolite bundle, and it's
21 32.6 micrometers long.

22 And we're in parallel dispersion. That's
23 the -- usually the first thing up on the particular
24 sample.

25 Now, if you go to the next page, page 23,

1 that's the perpendicular under dispersion staining.
2 You can see the change in color which is consistent for
3 tremolite/actinolite at these wavelengths.

4 Q. And now.

5 A. And now we're getting to the elongation. Now
6 it's at 400 times. So it's been to this, you know,
7 north -- sort of the northeast direction. And that
8 matches the colors it ought to be. And then under
9 crossed polars --

10 Q. Can we go to the next page, 25?

11 A. Well, you go to 25. We're still on this one
12 structure, because we're going through all the
13 different analytical procedures for identifying it.
14 Here we have it under crossed polars. And then the
15 very next one is the last one you would have with
16 crossed polars out. Now you're just looking at it
17 under the light. And you can see the individual
18 striations in there. The polarizers are out. And this
19 is regulated asbestos. It's going to be approximately
20 33 microns long, and those individual fibers in there
21 would give you aspect ratios of over a hundred to one,
22 closer to 200 to 1. So it meets all the regulations
23 that -- for these PLM analysis. For this.

24 Q. Let's keep going through this Tab 4 just so we
25 can talk through -- a complete through one sample so we

1 know what we're looking at.

2 A. So if you go to the very next sample, the very
3 next page where you have that 88.6. Now, pull it up so
4 you can see the bottom. This would be the second
5 structure that we're finding under the ISO method. So
6 you see the 0002? And, again, under parallel
7 dispersion. In this case you have more of the golden
8 yellow. And then the next page would give you the
9 perpendicular dispersion. Not that page.

10 Page Number 28.

11 Q. Go back.

12 A. It's hard to see in this lighting. And then we
13 would go on. Actinolite, tremolite -- the next one
14 would be the elongation, page 29.

15 Q. The pink or purple, is that always going to be
16 the elongation?

17 A. Yes. It's got the right colors at the right
18 direction under the polarizers and under the -- under
19 the 530-nanometer plate.

20 Then the next one is crossed polars.

21 Q. Now, this is page 30 of Exhibit 1097; is that
22 correct?

23 A. Correct.

24 Then the very next one is this same structure
25 again without crossed polars.

1 Q. Is there any question in your mind, Dr. Longo,
2 that this is regulated asbestos in the Cashmere Bouquet
3 product?

4 A. No, sir.

5 Now, just for completion, let's go to the very
6 next page, page 32. Now, here is the exact same sample
7 under the Blount method.

8 THE COURT: That's not the next page.

9 THE WITNESS: It should be. Page 32?

10 MR. SATTERLEY: Yes, Your Honor.

11 THE COURT: Well, it's a different sample on
12 the left.

13 THE WITNESS: Yes, sir, it is, but it's just an
14 example of the -- now the Blount PLM with the same
15 sample.

16 BY MR. SATTERLEY:

17 Q. Because BL, is that the -- right there. Does
18 that mean the Blount method as opposed to an ISO
19 method?

20 A. Correct.

21 THE COURT: Then the 002 and the 001 are
22 different.

23 THE WITNESS: Yes, sir. This is 005.

24 Now, one of the things you'll notice, it
25 seems -- even though it has some big particles in

1 there, there's not as much clutter around. It has
2 removed -- and this is -- a lot of this is not talc,
3 this is other ingredients there are in the -- in the
4 Cashmere Bouquet. You can see, even though you have
5 these big particles, it's not all this small, cluttered
6 stuff around, so it shows you how the talc is removed
7 and cleans the sample up.

8 BY MR. SATTERLEY:

9 Q. And the magnification level is different also.
10 It's a hundred magnification as opposed to what you
11 were talking about earlier was 400?

12 A. No. All the dispersion staining is typically a
13 hundred.

14 Q. Oh, okay.

15 A. 400 would be elongation. And if you go to the
16 very next page, page 34.

17 Q. I see. Let me stop there so I can clear my
18 confusion.

19 So when see something that's a hundred, if the
20 shape looks different, it's because it's a different
21 magnification, like a hundred to 400?

22 A. Correct.

23 Q. Okay. All right. Now we're on page -- am I on
24 the right page here, page 33?

25 A. That's 33. So now we're in perpendicular --

1 parallel. But if you go to the very next page --
2 because this is a good example of a very fibrous
3 bundle.

4 Q. No, wait a second. Let me -- no. This one
5 says perpendicular --

6 A. Perpendicular. If you go to page 34.

7 Q. Okay. I see. I see.

8 A. In this particular one, you can absolutely see
9 the single fibers in the elongation, as well as the
10 next pages, so this is a very good example of a very
11 fibrous bundle.

12 Q. So what we're seeing here on page 34 is a
13 close-up -- closer up view of what we were looking at
14 on page 33, 32, 31; correct?

15 A. That is correct. It's -- we were looking at
16 100. This is now 400.

17 Q. And there we got page 35. Is that yet
18 another -- the crossed polar of the asbestos in the
19 Cashmere Bouquet product?

20 A. Yes, sir. The same structure. It just shows
21 you a little bit more detail of the fibers.

22 And then the -- without the polarizers -- and,
23 again, you can -- you can see the individual fibers.
24 And so on.

25 Q. And it goes -- you have a whole bunch of

1 photographs that just demonstrate -- do you have a
2 whole bunch of photographs that demonstrate the
3 presence of asbestos in the Cashmere Bouquet product?

4 A. Yes, sir.

5 Q. There's one other term that you used. If we
6 flip over to Tab 10 to the elongation, page 159.

7 Is this Tab 10 yet another asbestos bundle in
8 a Cashmere Bouquet product?

9 A. Yes, sir.

10 Q. And page 160 -- actually, 161. "Aperture
11 diagram partially closed." What's that mean?

12 A. Diaphragm.

13 So that the aperture, which lets the light
14 through, is slightly closed to increase the -- increase
15 the contrast so that you can resolve these individual
16 fibers in the bundles better. It's just a -- it's an
17 optical microscopist's technique for changing the
18 contrast. Instead of hitting a darker button, it can
19 change the light and get you a better contrast.

20 Q. Based upon the PLM results, Dr. Longo, are you
21 of the opinion that there's asbestos in Cashmere
22 Bouquet talcum powder?

23 MR. MULARCZYK: Objection. Vague.

24 THE WITNESS: Yes, sir.

25 THE COURT: I'm going to overrule that. You

1 can inquire on cross-examination.

2 THE WITNESS: Yes, sir, for the samples that we
3 tested.

4 BY MR. SATTERLEY:

5 Q. Well, the four of them by PLM you didn't find
6 asbestos.

7 A. By PLM we did not.

8 Q. What about by TEM?

9 A. Yes, sir. The other four were positive because
10 we're looking at two different types of structures, and
11 so we only analyze those four by TEM. Since the Blount
12 PLM and the ISO PLM were positive, the negative ones we
13 checked to see if the TEM, which is more sensitive,
14 could determine if it was present or not.

15 Q. And Exhibit 1098, the folder, does that
16 represent photographs of some of the TEM results from
17 the Cashmere Bouquet product?

18 A. Yes, sir.

19 Q. And if we go to -- and did you find asbestos in
20 all four of the negatives by PLM?

21 A. Yes, sir, we did.

22 Q. And the second -- that Tab 2, page 9 of
23 Exhibit 1098, what does this represent?

24 A. This is a tremolite bundle, and these are one
25 of these even with the photograph you don't have any

1 doubt telling that's a bundle. You can see one, two,
2 three, four, five, six -- I can see six individual
3 fibers there. Some of those were -- where you've
4 circled actually have two -- two or three pushed
5 together, and, actually, you have one that almost has a
6 splayed end, which you normally do not see on TEM
7 because of the size.

8 Q. And splayed ends, is that a classic
9 identification of a bundle?

10 A. No. It's more of a classic identification of
11 commercial asbestos that's been added to bulk samples.
12 Very rarely do you see splayed bundles in TEM at all
13 because of the size you're looking at. It's the bulk
14 samples.

15 Q. I apologize. I should have asked the question
16 this way: The fact that this is -- these have splayed
17 ends and they're a bundle, does that indicate to you
18 that this is asbestos?

19 A. No. It tells us it's asbestos by meets all the
20 counting definitions, has the right chemistry, has the
21 right diffraction pattern. This is regulated tremolite
22 asbestos. But if you just -- as being interested in
23 this, this is what you would normally see in a product
24 where the asbestos has been added at very high
25 concentrations. It's very rare to see a splayed bundle

1 of tremolite in these talcum powders because tremolite
2 is brittle. So when they mill it, it grinds up. So
3 it's just interesting to see.

4 Q. And in this, you have -- you have -- do you
5 have the chemistry -- the calcium, magnesium, the
6 silica?

7 A. Correct. You have the -- again, it's almost a
8 fingerprint. It's a ratio of magnesium to silica to
9 calcium, all based on the height of the calcium peak.

10 Q. And do you have the diffraction pattern, the
11 SAED, that meets all the requirements that this is
12 asbestos?

13 A. Yes, sir.

14 Q. Now, back on this photograph, I just want to
15 ask, this part right here, is part of the film on the
16 grid torn there?

17 A. It's torn and gone. That's -- that's a carbon
18 film that is put on to the sample, the filter before we
19 dissolve the filter away.

20 That carbon film is actually only about 10 to
21 20 nanometers thick, about 15 to 20 atoms thick, so
22 it's very fragile. And the way it's done is, the
23 sample is collected on a filter. That filter is then
24 coated with carbon, and then a small piece of that
25 filter is put on the TEM grid and then put on filter

1 paper that's soaked with chloroform, and it slowly
2 dissolves away the filter and just leaves a replica of
3 the filter.

4 See all those little holes? Those are all the
5 pores that are in the filter that made a replica of
6 what you're seeing.

7 Q. And the fact that the film is partially gone
8 there, does that in any way detract from the fact that
9 this is a regulated asbestos bundle of tremolite?

10 A. Oh, no. It's -- it's not uncommon to see torn
11 films from just putting it in and out of the microscope
12 because you're going under pressure changes, because
13 it's so fragile.

14 Q. The same tab, Tab 2, what is depicted here, the
15 photograph on page 12?

16 A. Page 12 is another tremolite asbestos. I
17 believe if I was -- I think you can call this a bundle,
18 and it's either laying on top or underneath a talc
19 plate. That thing in the middle.

20 Q. This thing right here?

21 A. Yes, sir.

22 Q. And the chemistry, does the chemistry match up
23 to be a regulated tremolite?

24 A. Yes, sir, it does.

25 Q. And once again, the selected area electron

1 diffraction, does it match up?

2 A. It does.

3 Q. We have another one here on this sample. And
4 what does this represent?

5 A. This represents talc, fibrous talc.

6 Q. And is it labeled as talc there?

7 A. That's correct. This is not asbestos. This is
8 fibrous talc in the sample.

9 Q. And does it have the chemistry of talc?

10 A. Yes.

11 Q. And does it have the diffraction pattern of
12 talc?

13 A. Yes.

14 Q. So I'm not going to go through all these
15 photographs of all the asbestos in the TEM, but is
16 there any question in your mind, Dr. Longo, that
17 there's asbestos documented by TEM in the Cashmere
18 Bouquet samples that you received from the RJ Lee
19 Group?

20 A. No, there's no doubt.

21 Q. And has it been documented and photographed and
22 produced to the defendants, the lawyers for Colgate?

23 A. Yes, sir.

24 Q. Now, if somebody were to say to this jury that
25 you've never written a letter about or written a report

1 regarding the presence of asbestos in J&J products,
2 would that be true?

3 A. I've written reports. I'm not sure who I'm
4 supposed to send the letter to.

5 Q. Have you issued those reports and produced them
6 and produced them to J&J and been examined by J&J's
7 lawyers on many occasions?

8 A. Yes, sir.

9 Q. Now I want to switch gears and talk about
10 Patricia Schmitz.

11 Do you have your written, signed report that
12 you issued back in March of this year?

13 A. Yes, sir, I do.

14 Q. Does it outline many of the items that you
15 reviewed, including her deposition?

16 A. Her six volumes of deposition, yes.

17 Q. And did you review the testimony of her
18 sisters?

19 A. Yeah. Joni and Susan. I also reviewed that.
20 So eight depositions. Or actually nine.

21 Q. By the way, I should have asked this question
22 earlier: What does it mean if you find one fiber
23 bundle by TEM? How many fibers is that per gram?

24 A. Depending on the detection limit, either one
25 fiber or one bundle can run anywhere from 6,000 to

1 9,000 individual fibers in bundles per gram.

2 Q. And how does that equate in terms of how many
3 fibers per bottle?

4 A. Well, if you have a 9-ounce bottle, every ounce
5 is 28.4 grams, I believe, and if you have nine of
6 those, multiple that 28.4 by 9 by 9,000 fibers.

7 Q. Tell the folks on the jury what you did with
8 regards to your evaluation of Mrs. Schmitz' exposure to
9 asbestos from her talcum powder usage and being near
10 her family members when the product was being used?

11 A. I read all her depositions, as well as her
12 sisters' depositions, and then went through and said,
13 okay, well, she stated that, you know, when her sisters
14 were young and with her mother for three months, that
15 she would be there once a day for both sisters when the
16 sisters got bathed, and the mother would use Johnson
17 Baby Powder. And she said she was standing right
18 there. So that would be -- every day for those three
19 months would be two exposures, or two applications.

20 You know, and then -- and I'm going on to be --
21 you know, two times two and a half weeks after that for
22 1.7 years with the sisters, then diapering the sisters,
23 which she helped her mother. So I added up all those
24 applications.

25 And I tried to be conservative because she

1 would say things like diapering, you know, three to
2 four times per week. I would put 2.5 times per week
3 just for the times being missed, and that sort of
4 thing.

5 So when her mother applied the Johnson Baby
6 Powder to herself, she would be standing there. So I
7 added that up.

8 And so at the end of the day, I could get 2,199
9 Johnson Baby Powder applications.

10 Q. Those 2,199, was that relating solely to 1957
11 to 1967?

12 A. Yes, sir.

13 Q. Did you likewise evaluate the total number of
14 Johnson's Baby Powder applications relating to Vermont
15 talc source from '68 to 2003?

16 A. And that's a good point. I broke it down into
17 the different mines. So the '57 to '67, Johnson &
18 Johnson was using their -- their Italy source for talc.
19 And then I broke it down from 1968 to 2003, which was
20 the Vermont talc source that Johnson & Johnson was
21 using.

22 And for the -- for 1968 to 2003, when Patricia
23 was 10 years old in '68 until she was 13 in 1971,
24 testified that she used Johnson Baby Powder three to
25 four times a week for her personal bathing. So three

1 to four times a week, using three and a half times a
2 week times the three years that she did that, '68
3 to '71, was 825 applications.

4 Then she testified that she was present and
5 assisted when her mother was incapacitated because of a
6 bad shoulder, that she would bathe her two to four
7 times a week from 1998 to 2' -- approximately four
8 times a week from 1998 to 2005. So I said three times
9 a week times 52 weeks times five years.

10 Q. And you have a total of 1,605 applications?

11 A. Correct.

12 Q. Let me stop you right there. I would like for
13 you to assume -- well, nowhere in her deposition or her
14 sisters' deposition was there any discussion or
15 questions about her father having Alzheimer's; correct?

16 A. That is correct.

17 Q. About caring for him in the hospital bed in
18 their house in their dining room; correct?

19 A. No, sir. That never came out in the testimony.

20 Q. So if there was -- I'd like for you to assume
21 that there's additional testimony that Patricia Schmitz
22 helped take care of her father for roughly ten years,
23 the last ten years of his life, and utilized Johnson's
24 Baby Powder during those ten years, you haven't taken
25 that -- you haven't added that into this calculation;

1 correct?

2 A. No, not at all. That was -- that information
3 was never brought out in any of the depositions.

4 Q. So that would be on top of the calculations
5 that you've already made here in this report; correct?

6 A. Yes.

7 Q. And there would be additional exposure that
8 would be additive of the exposure assessment you have
9 in Mrs. Schmitz' case?

10 A. That is correct.

11 Q. With regard to the Chinese-sourced talc, how
12 many applications in -- to Chinese-sourced talc?

13 A. 312. From -- again from 2004 to 2005, three
14 times a week, when her mother needed help again.

15 Q. And then Cashmere Bouquet, did you do a similar
16 type of calculation with regards to her testimony
17 regarding her use of Cashmere Bouquet?

18 A. Yes, sir, I did.

19 Q. And what -- how many total applications of
20 Cashmere Bouquet did she have according to her
21 testimony?

22 A. According to her testimony, she used it from
23 1970 to 2005. And that she probably -- and she stated
24 that she used almost every day after bathing, she
25 stated she probably did not use Cashmere Bouquet

1 20 percent of those days. So not every day during that
2 time.

3 So daily minus 20 percent is 392 (sic) days of
4 use instead of 365, times 35 years.

5 Q. And what's the total application of Cashmere
6 Bouquet?

7 A. That works out to 10,220 applications.

8 Q. Did you also consider Avon and her -- the fact
9 that she used Avon product?

10 A. Yes, sir, I did.

11 Q. And what's the total application from 1980 to
12 2005 regarding her use of Avon?

13 A. 3,250 applications of Avon talcum powder.

14 Q. So what opinions have you developed based
15 upon -- and -- and what calculations have you developed
16 based upon her exposure, the description she has of
17 exposure, your knowledge of -- of this product with
18 regards to, first, Johnson & Johnson?

19 A. Well, the first opinion in -- for each of
20 these, that she would have had significant exposure to
21 cosmetic talcum powder from these three different
22 manufacturers: Johnson & Johnson, Colgate-Palmolive --
23 Cashmere Bouquet -- and Avon.

24 The second opinion is -- based on our testing,
25 based on historical documents, based on the percentages

1 that we find positive, it's my opinion that more likely
2 than not, when she used any of these products --

3 MR. CALFO: Your Honor, I object to this. He's
4 not an expert in statistics.

5 THE COURT: It's overruled.

6 You can answer that question.

7 THE WITNESS: Thank you, Your Honor.

8 -- that she would have had a significant
9 exposure to airborne asbestos -- and it's
10 interesting -- significantly over background, even
11 though there is no background of tremolite/
12 anthophyllite in the natural environment, unless there
13 is a source.

14 So you can use the IARC number of 1.0 times
15 10 to the minus 5 fibers per cc --

16 BY MR. SATTERLEY:

17 Q. You went too fast for me. 10 to the minus --
18 10 to the minus 5 --

19 A. 0 -- 0.0000.

20 Q. How many --

21 A. Five zeros. A .1 followed by four -- excuse
22 me. Four zeros and a .1. I did that backwards.

23 Q. Four zeros and a -- a 1?

24 A. And a 1.

25 Q. And that's the IARC background number?

1 A. Yes.

2 Q. Okay. And using that IARC back- -- background
3 number, based upon everything you know of Patricia
4 Schmitz, based upon everything you know of the
5 historical testing, based upon everything you know of
6 the scientific literature, did she have significant
7 exposures above background to asbestos from Johnson's
8 Baby Powder?

9 A. Yes.

10 Q. Did she have significant exposure above
11 background to Cashmere -- to asbestos from Cashmere
12 Bouquet --

13 A. Yes.

14 Q. -- talc?

15 MR. MULARCZYK: Objection. Foundation.

16 THE COURT: It's overruled.

17 BY MR. SATTERLEY:

18 Q. Go ahead.

19 A. Yes.

20 Q. And -- and -- and is it -- in terms of exposure
21 to asbestos, is it important to you that these products
22 were intended to be shaken out into the air?

23 A. Yes.

24 Q. And why is that important?

25 A. Because these products are designed to be --

1 not intentionally, but the way they're designed and
2 milled and ground and used, these particles become very
3 airborne very easily. You're not starting with an
4 asbestos product that you have to grind, sand, or do
5 something to get exposure.

6 This is just merely shaking a very fine powder
7 out that gets airborne very easily and stays airborne
8 very easily because of the sizes of those microscopic
9 particles. Excuse me.

10 So the way it's designed, you're shaking out a
11 very fine powder that causes exposure because it gets
12 airborne very easily. And with those accessory
13 minerals, such as tremolite or anthophyllite asbestos,
14 in there, that's what causes the exposure.

15 Q. And is that -- would it be fair to say this
16 product is not -- the asbestos in this product is not
17 encapsulated?

18 A. No, there is no encapsulation involved here.
19 It's just a mixture of cosmetic- or pharmaceutical-
20 grade talcum powder with trace amounts of --
21 potentially trace amounts of amphibole asbestos that we
22 can detect using these protocols we're using.

23 Q. Now, one other concept I want to talk with you
24 about in terms of exposure is a concept called
25 re-entrainment. What is re-entrainment?

1 A. It's an industrial hygiene word, and it's
2 really just a fancy word for getting the dust off the
3 surface and getting it back up into the air.

4 You know, it's like taking a rug out and
5 beating on it. And that dust that's gotten into that
6 throw rug over time will start coming out, and you can
7 see it, or sweeping up dust, where, if it's the right
8 lighting, you can see the dust that's moving as well as
9 what's getting up in the air.

10 So you're disturbing what's happened before,
11 that's now on a surface, and you're disturbing it again
12 by either sweeping or wiping or sometimes even walking
13 through it, because your foot going down causes
14 pressure for it to come up.

15 So it is redistributing asbestos dust that has
16 been put onto a surface after use.

17 Q. And do you have an opinion, Dr. Longo,
18 whether -- I would like for you to assume the testimony
19 will be that occasionally her sisters and herself would
20 clean up the baby powder or the Cashmere Bouquet after
21 they -- they applied it to their body or to their
22 family members.

23 And the cleaning up process, does that result
24 in additional exposures?

25 MR. MULARCZYK: Objection. Foundation.

1 THE COURT: Overruled.

2 THE WITNESS: Yes. In my opinion, it does.

3 BY MR. SATTERLEY:

4 Q. And by the way, Dr. Longo, you weren't in --
5 in -- at their house on Bay -- Bay Street over in
6 Alameda at any point in time; correct?

7 A. I was not.

8 Q. And -- and nobody -- you have not seen anybody
9 measure the level of dust that they were exposed to
10 from any -- any powder product; correct?

11 A. That is correct.

12 Q. You've not seen any instruction or direction
13 from any company saying, "Hey, you better measure the
14 amount of dust you're breathing in" at any point in
15 time, have you?

16 A. I have not.

17 Q. Now, in addition to your analysis, have you
18 relied upon published papers, where published papers
19 talk about --

20 Are you familiar with the Gordon paper in 2014?

21 A. I am.

22 Q. And have you relied upon the Gordon paper?

23 A. I have.

24 Q. And does the Gordon paper have information
25 regarding exposure and exposure that occurs with

1 regards to Cashmere Bouquet product?

2 A. That paper was all -- was all about exposure
3 from using Cashmere Bouquet products.

4 Q. And it was -- was that paper specifically
5 studying exposures to cosmetic talc products in terms
6 of what an individual may have?

7 A. Yes.

8 Q. And have you also read the Anderson paper,
9 Elizabeth Anderson, with a company called Exponent?

10 A. I have.

11 Q. And have you looked at the underlying data from
12 that paper with regards to the Cashmere Bouquet product
13 and whether or not it has asbestos in it?

14 A. I have.

15 Q. And based upon your analysis of that published
16 paper, the Anderson paper, and the underlying data,
17 does the underlying data support the fact that there's
18 asbestos in the Cashmere Bouquet product?

19 A. Not the way the paper is written, no.

20 Q. Well, what do you mean?

21 A. Well, it says that it's all cleavage frag;
22 there is no asbestos there.

23 Q. Okay. And the paper itself says it's all
24 cleavage fragments?

25 A. That's what I recall, yes, that -- in my

1 opinion, it's redefined what asbestos is.

2 Q. And have you had, in part of your reliance
3 materials, the underlying data from the lab in Hayward
4 to the Anderson paper?

5 A. Yes, sir.

6 Q. And does the underlying data demonstrate
7 anthophyllite asbestos being present in the Cashmere
8 Bouquet product?

9 A. Yes, sir, it does.

10 Q. And in your reliance materials, do you also
11 rely upon, with regard to Cashmere Bouquet, J&J
12 documentation from a -- from a Mr. Rolle in 1976
13 regarding finding of anthophyllite in Cashmere Bouquet?

14 A. Yes, sir, I do.

15 Q. And do you also rely upon J&J internal document
16 from I.W. Sloan, dated March 31, 1976, finding
17 anthophyllite in the Cashmere Bouquet product?

18 A. Yes, sir, I do.

19 Q. And do you also -- have you also read and
20 reviewed the Colorado School of Mines 1973 analysis of
21 Cashmere Bouquet Sample Number 9 regarding the presence
22 of asbestos?

23 A. Yes, sir.

24 Q. So based upon everything that you've analyzed,
25 is there any question in your mind, Dr. Longo, that

1 there's asbestos historically found in Cashmere
2 Bouquet?

3 A. No, sir, there's not.

4 Q. Any question in your mind that asbestos's
5 historically found in Johnson & Johnson Baby Powder?

6 A. No, there's no question in my mind.

7 Q. Now, me and my law firm, Ms. Clancy's law firm,
8 are paying you for your time here today; correct?

9 A. Yes, sir. My company will send a bill.

10 Q. And MAS, what is -- what do they -- the hourly
11 rate for your time?

12 A. I charge \$550 an hour, no matter what I do,
13 either in litigation or out of litigation.

14 Q. And do you consult with and -- and testify at
15 the request of defendants in litigation?

16 A. Yes, sir, I do. But to be fair, actual
17 testimony, deposition and trials, is primarily for
18 plaintiffs, like 95 percent of the time.

19 Q. And does your -- my -- your hourly rate, does
20 that change whether or not you're hired by a company to
21 assist in litigation or whether they're hired by
22 Ms. Schmitz or somebody like me?

23 A. No. It's the same price for either side.

24 Q. J&J's -- the lawyers said that you've changed
25 your methodology regarding analysis of talc.

1 Have you done that?

2 A. No.

3 Q. J&J's lawyers said that you now call something
4 a bundle because it sounds more like asbestos.

5 Is that accurate?

6 A. No, that's not accurate.

7 Q. Is --

8 A. They're both regulated asbestos.

9 Q. Is --

10 A. A fiber is a regulated asbestos. A bundle is
11 regulated asbestos. It makes no difference which one
12 it is.

13 Q. Is -- is -- if there is a bundle of tremolite
14 that meets -- that has the chemical makeup, meets the
15 SAED to amphibole, and it's a bundle, is there any way
16 a scientist, based upon the methods, can call it a
17 cleavage fragment?

18 A. No, none. It doesn't make any sense. It's --
19 a cleavage fragment can't form a bundle. You're
20 breaking a rock, and you get pieces. It's like
21 breaking a glass bottle.

22 Now, all those pieces microscopy would have to
23 be perfect fibers all lining up together, in which
24 they're all pointed in the same direction, and they're
25 all touching. That is an impossibility, for a cleavage

1 fragment or to smash up a rock and -- and make a
2 bundle. There should be no dispute about that.

3 Q. J&J's counsel said that the concentration
4 method Dr. Longo uses simply does not work.

5 Is that true?

6 A. No, that's not true at all. It's -- it's -- it
7 works really well. I'm not the only one who's done
8 that. Alice Blount did it and published it in a
9 peer-reviewed paper. Johnson & Johnson was looking at
10 it all the way back in the '70s.

11 I don't know how it doesn't work, other than,
12 no, it can't find chrysotile asbestos. But that
13 doesn't eliminate the fact that it's very good at
14 concentrating amphibole asbestos, if present, at the
15 concentrations that it can find.

16 Q. J&J's counsel said, "Dr. Pooley concluded
17 45 years ago that the concentration method doesn't
18 work."

19 Have you seen any documentation where
20 Dr. Pooley, 45 years ago, said the concentration method
21 and the heavy liquid separation doesn't work?

22 A. No, sir. I've seen the opposite. He was
23 looking at patenting that method in England. That's
24 not something that you would say doesn't work, if
25 you're thinking about getting a patent.

1 Q. J&J's counsel said --

2 MR. CALFO: I object. Move to strike. That's
3 speculation. Pure speculation.

4 THE COURT: You may inquire on
5 cross-examination.

6 BY MR. SATTERLEY:

7 Q. J&J's counsel said, "he FDA discontinued the
8 concentration method because it doesn't work a long
9 time ago."

10 Have you seen any documentation from the FDA or
11 otherwise that said they dis- -- adopted or
12 discontinued the concentration method?

13 A. No. They sort of threw up -- I mean, what --
14 there's an explanation for that, if you would like me
15 to state what they actually said.

16 THE COURT: Just answer the question. If he
17 wants an explanation, he'll ask.

18 THE WITNESS: Sorry, Your Honor.

19 No.

20 BY MR. SATTERLEY:

21 Q. Couple other documents. Then I'm going to sit
22 down.

23 This is already into evidence. It's
24 Exhibit 163.

25 MR. SATTERLEY: May I approach, Your Honor?

1 THE COURT: You may.

2 MR. SATTERLEY: And I'll hand you both of these
3 documents at the same time. They're both into
4 evidence. This is 163, and this one is 313.

5 BY MR. SATTERLEY:

6 Q. And I want to ask you about Dr. Langer,
7 Dr. Arthur Langer. You personally met Dr. Arthur
8 Langer?

9 A. Yes, I have, a number of times.

10 Q. Is Dr. Arthur Langer a -- a mineralogist?

11 A. He is.

12 Q. And has Dr. Arthur Langer been associated years
13 ago with the Mt. Sinai School of Medicine?

14 A. He was at one point.

15 Q. And this first document I want to show you
16 is -- it's -- that you've seen -- you've seen these --
17 both these documents in the past; correct?

18 A. Yes, sir, I have.

19 Q. And in doc- -- this 163, July 9, 1971, does
20 this relate to Dr. Langer's analysis of talc back in
21 1971?

22 A. It does.

23 Q. And does Dr. Langer, in this 1971 J&J
24 memorandum, talk about analysis of talc by use of the
25 light and the electron microscope of Johnson's Baby

1 Powder?

2 A. It does.

3 Q. And does he -- does this J&J internal
4 memorandum talk about the meeting they had with
5 Dr. Langer, where Dr. Langer demonstrated his technique
6 for observing fibrous materials in the Johnson's Baby
7 Powder?

8 A. It does.

9 Q. And does this memorandum in 1971 talk about
10 Dr. Langer's finding talc and chrysotile in tissue in
11 1971 from folks being exposed to talcum powder product?

12 A. Yes, sir.

13 Q. And your lab has done analysis both those
14 products and on tissue; correct?

15 A. That is correct.

16 Q. And in this 1971 memorandum, does it say,
17 "Using electron microscopy, Dr. Langer has demonstrated
18 to me the presence of some very fine fibers at
19 moderately high magnification, which he identified as
20 chrysotile asbestos by the typical tubular appearance
21 of the fiber"?

22 Do you see that?

23 A. Yes, sir.

24 Q. And did we see in -- in some of the photographs
25 from Dr. Hutchinson at the University of Minnesota the

1 tubular appearance of chrysotile that's sort of --
2 that's being referenced there?

3 A. Yes, sir, that's true. It's actually tubular.
4 It looks like a straw, a soda straw, that you're
5 looking through.

6 Q. And he -- the summary of this internal J&J
7 document says, "Chrysotile is identified in the
8 electron microscope by its" characteristics --
9 "characteristic tubular appearance at high
10 magnification."

11 Correct?

12 A. Yes, sir.

13 Q. Now, the next document I want to ask you
14 about --

15 By the way, Dr. Langer is a noted mineralogist
16 that you've interacted with in meetings in the past;
17 correct?

18 A. Either in meetings or as an expert on the other
19 side of me.

20 Q. Okay.

21 A. Both ways.

22 Q. The next document I want to ask you about
23 relates to Exhibit 313. This is November of 1972, and
24 it's on Johnson & Johnson letterhead. It's into
25 evidence. And it's called "Antagonistic Personalities

1 in the Talc Story in the United States," and this is
2 written by Dr. Gavin Hildick-Smith, carbon copy to
3 Dr. Fuller, Dr. Nashed, Dr. Petterson, Dr. Sauchuk
4 Dr. Shelley, and Mr. Zeitz; correct?

5 A. Yes, sir.

6 Q. And they -- in this 1972 memorandum, they say,
7 "The increase in the profile of talc as a potential
8 health hazard has been actively promoted by a number of
9 individuals for a variety of reasons."

10 Then they go on to identify individuals, and I
11 want to ask you -- Dr. Selikoff, have you read many
12 papers from Dr. Selikoff at Mt. Sinai?

13 A. I have.

14 Q. Is Dr. Selikoff, in your opinion, a well-
15 regarded expert on asbestos -- asbestos and health
16 issues?

17 A. Yes, sir. He's considered the pioneer of all
18 that.

19 Q. It says, "Dr. Selikoff of Mt. Sinai Hospital,
20 who is an epidemiologist heavily involved with asbestos
21 and its adverse effects on health," he -- "has
22 observed (sic) considerable financing from a variety of
23 sources for research into the epidemiology of asbestos,
24 with particular reference to its industrial hazards.

25 "He retains a press agent on a full-time basis,

1 who gives him media exposure at regular intervals.

2 "Although he has stated that he doesn't believe
3 that talc is a health hazard and" larger -- "largely
4 concerns his activities with asbestos, he played a
5 significant role in the first talc meeting with the FDA
6 when he initiated proceedings by showing particularly
7 alarming pictures of patients suffering from cancer
8 relating to asbestos.

9 "It is believed that Dr. Selikoff wrote the
10 Merliss paper or at least edited it and provided
11 references for it. See attached."

12 My question to you, Dr. Longo: Have you read
13 and considered the Mt. Sinai work with regard to
14 asbestos in talc in the 1970s --

15 A. Yes, I have.

16 Q. -- what was published in the scientific
17 literature?

18 A. Yes, sir.

19 Q. And do you find that to be scientifically
20 useful in understanding the history of -- of asbestos
21 in talc?

22 A. Yes.

23 Q. They also have on their antagonistic
24 personalities list Dr. Langer, who works with
25 Dr. Selikoff and is a microscopist.

1 Do you consider yourself a microscopist?

2 A. Not an antagonistic one, no.

3 Q. Okay. But are you -- you're a -- a
4 microscopist; correct?

5 A. Yes, sir. I'm a material science engineer
6 that's spent a lot of time in microscopy. I'm a
7 microscopist, TEM microscopist, SEM. So yes.

8 Q. It says, "There are several other" --
9 "Dr. Selikoff's department who have the same mental
10 attitude as Dr. Selikoff."

11 Have you, over the course of your career, met
12 some of the other folks or -- or, I guess, read some of
13 the papers published by some of the other folks,
14 Dr. Arthur Rolle, Dr. -- forgot the other names.

15 Have you read some of the other Mt. Sinai
16 studies?

17 A. Yeah. There was, you know, Ivan Rubin. There
18 was Dr. Rolle. Obviously, Dr. Langer, who stands out
19 the most. But, yes, I have looked over Selikoff's
20 guys' works in the past.

21 Q. There are several other names here, and I'm not
22 going to go through them all, but I wanted to ask about
23 Dr. Lewin.

24 Dr. Lewin, who is a professor of analytical
25 chemistry at New York University, have you looked at

1 and considered Dr. Lewin's results and his findings of
2 asbestos in -- in talc?

3 A. Yes, sir, I have.

4 Q. They conclude, "We believe that the Selikoff
5 group, Mr. Kretchmer's group, Dr. Lewin, and
6 Dr. Weissler are in constant communication, although
7 there is some disagreement between Dr. Selikoff and
8 Mr. Kretchmer over Mr. Kretchmer's publicity and
9 Dr. Selikoff's research findings which were not
10 accurately presented in the newspaper."

11 My question to you is, have you ever taken all
12 the -- the reports that you've issued and put them in a
13 scientific journal?

14 A. Not yet, no.

15 Q. And have you just recently, in the past few
16 years, analyzed talc for the presence of asbestos?

17 A. Yes, sir. I only started doing that two years
18 ago.

19 Q. Okay. And prior to analyzing talc for the
20 presence of asbestos just a couple years ago, did you
21 know that Johnson's Baby Powder had asbestos in it?

22 A. I had no idea.

23 Q. Prior to analyzing the presence of asbestos in
24 Cashmere Bouquet just a few years ago, did you have any
25 clue whatsoever that it had asbestos in it?

1 A. Not until the 2015 paper came out and I was
2 talking to Dr. Millette and others, who were starting
3 to do this work. But before that, never considered
4 that talcum powder would have asbestos in it that --
5 that we're finding.

6 Q. When you said 2016 (sic), you mean the Gordon
7 paper in 2014?

8 A. 20- --

9 Q. 2014?

10 A. 2014, 2015.

11 Q. Okay.

12 A. That's when I started noticing it.

13 Q. And -- and prior to a couple years ago, when
14 you were analyzing this talc, had you ever had access
15 and reviewed the historical internal documents of
16 Johnson & Johnson regarding the presence of asbestos in
17 talc?

18 A. No, not until I got involved.

19 Q. And prior to just a couple years ago, had you
20 reviewed any internal company documents historically of
21 Cashmere Bouquet?

22 A. No, sir.

23 Q. Have all of the opinions been stated here
24 today, Dr. Longo, to a reasonable degree of scientific
25 certainty?

1 A. Yes, sir.

2 MR. SATTERLEY: I might have -- I may have
3 follow-up questions, depending on what questions these
4 folks ask you. Okay?

5 THE WITNESS: Sure.

6 MR. SATTERLEY: Thank you so much.

7 THE COURT: Mr. Calfo.

8 MR. CALFO: Yes, Your Honor.

9 CROSS-EXAMINATION BY MR. CALFO:

10 Q. Good afternoon, Dr. Longo.

11 A. Good afternoon.

12 Q. I'm just going to ask you one question right
13 off the bat.

14 A. Sure.

15 Q. You just told this jury under oath that you
16 have only started analyzing cosmetic talc two years
17 ago. Didn't you just tell the jury that under oath?

18 A. Let's see. 2017, 2018, 2019. Yes, sir.

19 Q. Okay. Good. We'll talk about that a little
20 bit later.

21 A. I guess two and a half years now.

22 Q. Okay. Let's start with a -- a few things, if
23 we could --

24 A. Yes, sir.

25 Q. -- that I told the jury in opening.

1 MR. CALFO: Your Honor, I would like to
2 publish, if I could, Defense Exhibit 421331.

3 MR. SATTERLEY: It's not in evidence,
4 Your Honor.

5 MR. CALFO: It's a demonstrative, Your Honor.

6 THE COURT: I haven't seen it.

7 MR. CALFO: May I -- may I approach?

8 THE COURT: Can we talk at sidebar.

9 (Whereupon, a sidebar between the Court and
10 counsel was had and not reported.)

11 BY MR. CALFO:

12 Q. Dr. Longo, what I am going to ask you is this:
13 Do you agree with this statement? You've never tested
14 cosmetic talc when you weren't being paid to do it by
15 the plaintiffs' lawyers; isn't that right, sir?

16 A. That is correct.

17 Q. And, in fact, you told the jury some numbers,
18 but isn't it true, Dr. Longo, that 100 percent of your
19 work in talc litigation is for the plaintiffs'
20 attorneys?

21 A. Yes, that's correct.

22 Q. In the last 30 years, working as an expert for
23 plaintiff law firms, you told us your company billed
24 \$30 million; is that right?

25 A. Yes, sir. About a million a year.

1 Q. In fact, you've testified before, Dr. Longo,
2 that the money you've made working as a litigation
3 consultant and expert witness has allowed your lab to
4 survive; isn't that right?

5 A. That's a true statement.

6 Q. And one of the things that you mentioned before
7 is, you've got to keep your lights on; right?

8 A. Yes, sir. If you work in the office, you need
9 to keep the lights on.

10 Q. And just so there's no mistake, you own
11 75 percent of your company, don't you?

12 A. Yes, sir, I do.

13 Q. And you billed \$30 million just to the
14 plaintiffs' lawyers; true?

15 A. I believe that's correct. For all the work we
16 do, all the different scientists that work on the
17 projects, yes, sir.

18 Q. You're not a geologist; true?

19 A. I do not have a degree in geology.

20 Q. And you don't have a degree in mineralogy, do
21 you, Dr. Longo?

22 A. No, I don't.

23 Q. So let me ask you this: If the plaintiffs'
24 lawyers, when they hired you, were looking for somebody
25 who had a degree in geology and mineralogy, that

1 wouldn't have been you, would it?

2 A. Well, if that was their criteria. I don't have
3 a degree in geology or mineralogy, so...

4 Q. Dr. Longo, you've never been to any of the
5 mines that you just told us about, have you?

6 A. No, sir, I haven't.

7 Q. And you mentioned -- I -- did you mention you
8 worked for NASA?

9 A. Yes, sir.

10 Q. Did you mention you work for ASTM?

11 A. I didn't mention I worked for NASA, but I have,
12 but I've never worked for ASTM.

13 Q. Okay. Well, the truth is, none of that work
14 that you had done that's on your resumé had anything to
15 do with testing cosmetic talc powder; isn't that right?

16 A. Yes and no. And I'll explain, if you like.

17 Q. Go ahead, Doctor.

18 A. No, it doesn't have anything to do with
19 analyzing cosmetic talc, per se, but it has everything
20 to do with the fact that we saw problems for scientists
21 for microscopic issues, and all of these studies that
22 we have done for all these different companies involved
23 some sort of development and understanding the problem
24 and using the best methodology.

25 So that's --

1 Q. Doctor, we're going to go --

2 A. -- that's the "yes and no" part.

3 Q. We are going to go through some of the
4 documents that you told the jury about with Johnson &
5 Johnson.

6 First of all, you don't know anyone at
7 Johnson & Johnson; you didn't work there. Right?

8 A. You're correct on that.

9 Q. All right. We'll get into that in a little
10 bit.

11 But before we do, no government agency has ever
12 asked you to test cosmetic talc; isn't that right, sir?

13 A. That's correct.

14 Q. And you've not written a written,
15 peer-reviewed, published paper anywhere in the world in
16 any way relating to cosmetic talc; isn't that right?

17 A. That's correct. We have not published these
18 results yet.

19 Q. And Doctor, if plaintiff lawyers were looking
20 for somebody who was well published in the scientific
21 literature on cosmetic talc, that would not have been
22 you, would it?

23 A. No, it would not.

24 Q. So let me ask you this. You told the jury a
25 little bit about your background in material science.

1 You remember that?

2 A. Yes, sir.

3 Q. You didn't take any courses whatsoever that
4 dealt with asbestos in undergraduate studies, did you?

5 A. That is correct.

6 Q. In other words, you didn't go to college to
7 study asbestos, did you?

8 A. No, sir, I didn't.

9 Q. In fact, you didn't become interested in
10 material science until after college; true?

11 A. Well, after my undergraduate degree, I -- my
12 whole life, I was going to be a veterinarian. I mean,
13 studied it, everything in my life since I was 6 years
14 old. Got my four-year degree and got rejected from
15 veterinary school. Couldn't believe it.

16 So I was looking -- I didn't have a Plan B, so
17 I was looking for a job, and the material science
18 department had an opening for a lab tech, because I had
19 to support myself.

20 Q. So Doctor, as I understand it -- --

21 A. And they invited me to be a graduate student
22 there, and I said, "No, no. I'm going to veterinary
23 school. I'm doing post baccalaureate."

24 And they said, "Well, I think maybe the board
25 would have a better idea" -- "it might be better if you

1 were in graduate school."

2 I said, "Ah, okay," and I never looked back.
3 So that's how I became a material scientist.

4 Q. And I thank you for that. Thank you for that,
5 Doctor. We appreciate it.

6 A. You're welcome.

7 Q. Now, you didn't take any courses that
8 specifically dealt with asbestos to get your master's,
9 did you?

10 A. No.

11 Q. Is that true?

12 A. That's true.

13 Q. And you didn't take a single class that dealt
14 specifically with asbestos during your Ph.D. work, did
15 you, Doctor?

16 A. Not per se, no.

17 Q. In fact -- I think Mr. Satterley asked you --
18 you're not a medical doctor; right?

19 A. No, sir, I'm not.

20 Q. And when we talk about Ms. Schmitz -- you don't
21 treat patients; true?

22 A. No, sir, I don't.

23 Q. And you didn't review any of Ms. Schmitz's
24 medical records; true?

25 A. That is true, I did not.

1 Q. And I think you told me under oath that you
2 cannot say one way or the other what caused
3 Ms. Schmitz' mesothelioma. True?

4 A. No, sir. I never talk about causation effects.
5 I let that -- others do --

6 Q. And --

7 A. -- debate or discuss that.

8 Q. And one of the things you told me in your
9 deposition -- in fact, I think you volunteered it --
10 is, you don't know where -- you are not going to opine
11 where her mesothelioma originated. True?

12 A. No, sir. I don't talk about medical issues.

13 Q. Okay. Now, you mentioned a little bit about
14 industrial hygiene; right?

15 A. Yes, sir.

16 Q. And you took no undergraduate or graduate -- or
17 graduate courses in industrial hygiene; isn't that
18 right?

19 A. That is correct.

20 Q. And you're not a certified industrial
21 hygienist; true?

22 A. That's true. I'm not.

23 Q. And you never took the test to be become
24 certified; correct?

25 A. That is correct.

1 Q. And -- and we're going to -- as I told you, we
2 are going to talk about some internal Johnson & Johnson
3 documents. You told us you never worked at Johnson &
4 Johnson; right?

5 A. That's still correct.

6 Q. And you don't know Dr. Hopkins personally;
7 true?

8 A. That's true.

9 Q. And you don't know any recipient of any of the
10 Johnson & Johnson documents, do you, sir?

11 A. No, sir, I don't.

12 Q. And you've never spoken to any of them, have
13 you?

14 A. No, sir, I haven't.

15 Q. So let's talk a little bit about your
16 testifying in asbestos litigation. And I think you
17 told us since 1989 or 1990. Is that correct, Doctor?

18 A. I think I gave my first deposition in '91 or
19 so; '92, maybe, the latest.

20 MR. CALFO: Let's pull up Defense
21 Exhibit 42125, which -- I think the plaintiffs had a
22 different exhibit, which was --

23 I can't remember. Do you remember, Counsel?

24 MR. SATTERLEY: It was a defense exhibit. It
25 was, I think, 199 or something like that.

1 MR. CALFO: Your Honor, can we fix it, get the
2 number? I have my exhibit, but I think the plaintiff
3 used his.

4 THE COURT: You can publish that one.
5 BY MR. CALFO:

6 Q. And Doctor, I don't want to belabor this too
7 much, but this was an advertisement you ran 30 years
8 ago. And you ran that ad also in the National Asbestos
9 Council magazine; true?

10 A. That's true.

11 Q. And did you tell the jury you weren't
12 advertising your litigation or lawsuit -- lawsuit
13 services here?

14 A. Yes, sir. I was advertising our final air
15 clearance and what a good job we did.

16 Q. So, even though you chose to picture yourself
17 in a courtroom in that photograph. That's true?

18 A. That's true.

19 Q. And you told the jury you were advertising your
20 laboratory services, but this photograph is not in your
21 fancy lab, is it, sir?

22 A. It's not in our lab, no.

23 Q. You're wearing a suit, aren't you?

24 A. Yes, sir.

25 Q. You're not wearing a lab coat; true?

1 A. That's still true.

2 Q. And your quote there, on the top, if we look,
3 it says, "Will your TEM laboratory's data make it
4 through the toughest meeting of your life?"

5 Do you see that, sir?

6 A. Yes, sir.

7 Q. And that meeting you're portraying is a
8 courtroom; true?

9 A. Yes, sir. If our client -- the data was
10 challenged and we had to go defend it for our client,
11 we would do it.

12 Q. So the meeting that you are portraying is there
13 in a courtroom; true?

14 A. That's true.

15 Q. Let's go to the next one.

16 "Not only" -- if we can find it there. "Not
17 only will the data stand up in court" --

18 MR. CALFO: Can we pull that up?

19 Let me put it on the Elmo.

20 MR. SATTERLEY: It's 1099.

21 BY MR. CALFO:

22 Q. "Not only will the data stand up in court, so
23 will the professionals who documented it."

24 Right?

25 A. Yes, sir. I think it's missing some stuff.

1 Q. I think I heard you tell Mr. Satterley that
2 language means standing up in court for final air
3 clearance samples.

4 Did you tell Mr. Satterley that?

5 A. Yes, sir.

6 Q. By the way, just so we're clear, final air
7 clearance samples, those are air samples taken from
8 buildings like schools where asbestos has been removed;
9 isn't that right?

10 A. That is correct.

11 Q. But, Doctor, you've never testified in court to
12 defend your air clearance results, have you?

13 A. No, sir, I haven't. We're that good.

14 Q. And if we look at the bottom of your
15 advertisement, it says, "Professional asbestos
16 consultants and contractors know that when the job
17 demands the best final air clearance testing by TEM,
18 you go to the people whose rigorous in-house quality
19 control measures produce TEM results and professional
20 support that stands up in the toughest tests you may
21 face." Isn't that right?

22 A. Yes, sir, that's what it states.

23 Q. And again, Doctor, what you're talking about
24 are the toughest tests you face in court; isn't that
25 true?

1 A. For clients who are taken in there, yes, sir.

2 Q. And, since this ad was run, your business in
3 litigation has really picked up, hasn't it, sir?

4 A. Since the ad, not really. It's -- had nothing
5 to do with getting involved in litigation a couple
6 years later.

7 Q. Well, since this ad ran in the National
8 Asbestos Council magazine, you've given about 3,000
9 depositions; right?

10 A. Yes, sir. Over 30 years, that's about correct.

11 Q. And you testify, on average, once or twice a
12 week; isn't that true, sir?

13 A. That is correct.

14 Q. And you've testified in front of juries just
15 like we have now hundreds of times, haven't you, sir?

16 A. Yes. That's correct.

17 Q. And you've been designated as an expert several
18 thousand times by plaintiffs' lawyers suing for money
19 in litigation, haven't you, sir?

20 A. That's probably correct, yes.

21 Q. And you've testified to this: You think every
22 plaintiff's attorney in the country lists you in any
23 type of asbestos litigation; isn't that right, sir?

24 A. Yes, sir, I think that's happened.

25 Q. Let's talk about some of the work you've done

1 for plaintiff law firms before you ever started working
2 on cosmetic talc. Okay?

3 A. That's fine.

4 Q. And by the way, you know, people have been
5 testing cosmetic talc for over 70 years; right?

6 A. That's what it looks like.

7 Q. And you just told the jury the first time you
8 ever got involved was two or three years ago; right?

9 A. Two and a half years ago, that's correct.

10 Q. But you've been doing asbestos litigation for
11 decades and decades and decades; isn't that right,
12 Doctor?

13 A. Over a few decades, yes, sir.

14 Q. For the better part of your career, Doctor,
15 you've run tests on asbestos-containing products;
16 right?

17 A. Yes, sir. That's my area of interest.

18 Q. And why don't you tell the jury about the
19 asbestos-containing products -- well, let me ask you
20 this: You've testified about asbestos-containing
21 automotive brakes; true?

22 A. That's true.

23 Q. Asbestos-containing boiler insulation?

24 A. That is correct.

25 Q. Automotive brake clutches?

1 A. Yes, sir.

2 Q. Compressors?

3 A. If it has a certain type of gasket in it, yes,
4 sir.

5 Q. Cement pipe?

6 A. Yes.

7 Q. Has a lot of asbestos in it, doesn't it?

8 A. 20 -- let's see -- runs anywhere from 15 to
9 22 percent asbestos.

10 Q. And we don't have it in the courtroom, but
11 there are ceiling tiles that have asbestos that you've
12 testified about; true?

13 A. That's -- in the past, that's correct.

14 Q. Floor tiles with asbestos in it?

15 A. Yes, sir.

16 Q. Gaskets have a lot of asbestos, don't they,
17 sir?

18 A. Industrial gaskets have quite a bit, about
19 70 percent. Anywhere from 65 to 85 percent depending
20 on what specification, what pressure, what temperature
21 it has to be at.

22 Q. Insulating cement. You testified about all the
23 asbestos in that, haven't you, sir?

24 A. Yes, sir.

25 Q. Joint compound?

1 A. That's correct.

2 Q. And joint compound is the stuff you put on your
3 construction walls?

4 A. For drywall, the seams. Typically known as mud
5 where they can take a seam, put drywall on it, sand it
6 to the point where you can't tell where that seam is
7 anymore, or nail hole, or what have you.

8 Q. I'm going to ask your help with this, Doctor.
9 What's Monokotay (phonetic)? I don't even know
10 how to say it.

11 A. Monokotay?

12 Q. Yeah. What is that?

13 A. Well, at this point I could just make up
14 anything. I think what you're trying to say is
15 Monokote fireproofing, Monokote 2 -- 1, 2, and 3.

16 Q. And that has asbestos in it?

17 A. Yes, sir. That was a fireproofing that was
18 manufactured by W.R. Grace from about 1961 to 1971.
19 Had approximately 10 percent chrysotile asbestos,
20 35 percent vermiculite, and 65 percent gypsum. Or
21 55 percent gypsum.

22 Q. Just to round this off, I don't want to take
23 too much time, but you've testified in cases because
24 pipe has insulation around it, with asbestos; right?

25 A. Yes, sir.

1 Q. Packing?

2 A. Yes.

3 Q. Textured paint?

4 A. Some textured paints do, not all.

5 Q. And wire has asbestos. You've testified about
6 that, haven't you?

7 A. Yes, sir. Primarily for defendants, because
8 for whatever -- because it doesn't release asbestos
9 like some of the other asbestos products.

10 Q. Now, you were paid by plaintiffs' attorneys in
11 lawsuits to test those asbestos-containing products,
12 weren't you?

13 A. No. I wasn't paid by defense -- plaintiffs'
14 attorneys to test the wire. That was defense
15 attorneys. And many of those tests we did on our own
16 for research. But some of those tests were paid for by
17 plaintiffs' attorneys.

18 Q. Doctor, you were hired to measure the amount of
19 asbestos those products have in them, weren't you?

20 A. In some cases, yes; in some cases, no.

21 Q. And of those products, most of them had
22 asbestos where the product was intentionally added as
23 part of its design; true?

24 A. That is true.

25 Q. And some of them, like the gaskets, I think you

1 told us, could contain as much as 85 percent asbestos;
2 true?

3 A. Industrial gaskets, that's very true.

4 Q. And that's different from a product that may
5 have a trace amount of asbestos as an accessory
6 ingredient; true?

7 A. It's different concentrations, that's true, but
8 a completely different type of product. One's been
9 manufactured with asbestos and you actually have to do
10 something to it to get high exposures.

11 The other one, even though there are trace
12 amounts, is a very fine powder that you shake out on to
13 your body every day if you use it continuously. So you
14 can't compare one with just a little bitty trace versus
15 one that has a lot of asbestos. It all depends what
16 you do to that one with all the asbestos.

17 Q. Doctor, what you've done for 30 years is you
18 come into court and you talk about all those
19 asbestos-containing products and all the dust and that
20 the people breathe; right? That's what you've been
21 doing. You've done tests on that.

22 A. Yeah. But you're kind of embellishing what I
23 do.

24 MR. CALFO: Your Honor, I move to strike.

25 THE COURT: He can answer the question.

1 MR. CALFO: Okay. Please do.

2 THE COURT: He's responding directly to your
3 question.

4 THE WITNESS: What I do is just don't go in and
5 say all this dust comes flying out. We look at
6 particular type of work practices. You can take an
7 asbestos gasket that has 70 percent asbestos in it,
8 pick it out, put -- it's new, put it on a flange, you
9 don't get exposed -- or you can't -- too low to measure
10 it. But when they take that gasket off at a later date
11 and use a power grinder at 4500 rpm that's using air
12 blowing around, yes, you get very high exposures.

13 What we're talking about here is powder that is
14 as fine as cement powder that you are putting on your
15 body. So you can't compare one has a lot of asbestos
16 in it versus another one that's a very fine powder
17 because of the asbestos content.

18 So it's different.

19 BY MR. CALFO:

20 Q. Well, let me -- for example, here, in some of
21 the Johnson's Baby Powder bottles you tested, you
22 detected no asbestos; right, Doctor?

23 A. That is correct.

24 Q. In fact, I told the jury in opening of the
25 bottles you claim to find asbestos in, the lowest

1 concentration was 0.0000033. Do you remember finding
2 asbestos of that amount, percent by weight?

3 A. Yes. By weight percent, yes.

4 Q. So we all know what we're talking about here,
5 just so we're clear, you've been talking all day about
6 Johnson's Baby Powder and Cashmere Bouquet; right?

7 A. Yes, sir.

8 Q. And so we all know what we're talking about
9 here today, when you talk about talcum powders used on
10 babies, you're talking about Johnson's Baby Powder;
11 right?

12 A. Yes, sir.

13 Q. And, in fact, of the bottles of Johnson's Baby
14 Powder you claim to find asbestos in, the highest
15 amount was 0.035; true?

16 A. By weight percent, not by fiber bundle count.
17 That's true.

18 Q. And before you got heavy into cosmetic talc
19 lawsuits in the last two or three years, about 35 to
20 40 percent of MAS's business came from consulting in
21 litigation; true?

22 A. That's true.

23 Q. But in the past year, your litigation
24 consulting increased to about 70 percent of your entire
25 business; isn't that right?

1 A. That is correct.

2 Q. And the jump from 40 to 70 percent is primarily
3 due to your work now in talc litigation, which is just
4 in the last two or three years; right, Doctor?

5 A. That is very true.

6 Q. Now, before we talk about your testing, let's
7 talk about what you were asked to do, okay?

8 It wasn't, I think you said, until 2016, or was
9 it 2017 that you started getting involved in cosmetic
10 talc litigation?

11 A. It was the end, I believe, of 2016 -- 2017 when
12 we -- after researching and picked the type of analysis
13 we were going to do and draw the heavy liquid. I think
14 it was early 2017 we started doing the first analysis.

15 Q. Okay, Doctor. And it wasn't until late 2016
16 when you were asked by Mr. Satterley that you got
17 involved in cosmetic talc litigation; right?

18 A. That is correct.

19 Q. And you've testified, I think you just told us,
20 under oath, that prior to 2016, you had never tested a
21 cosmetic talc powder at all for any reason; right?

22 A. I don't think so. I can't find any record of
23 cosmetic talc versus industrial talc.

24 Q. Where I'm going with this is, so if the
25 plaintiff lawyers, when they hired you, were looking

1 for somebody who had been in the practice of testing
2 cosmetic talc before 2016, that would not have been
3 you; right?

4 A. That's correct.

5 Q. In 2016 what happened is you received samples
6 of Johnson & Johnson talc from three plaintiff law
7 firms; right?

8 A. That's correct. 2016, 20' -- early 2017, I
9 think.

10 Q. Thank you, Doctor.

11 And one of the law firms that you received the
12 samples from was Mr. Satterley's firm and Ms. Clancy's
13 firm, the Kazan firm; true?

14 A. That is true.

15 Q. The other firm was the Lanier law firm?

16 A. That is true.

17 Q. And the other one I think you told us about was
18 the Simon Greenstone Panatier firm; true?

19 A. That is correct.

20 Q. And the plaintiff lawyers at that time didn't
21 just send you Johnson & Johnson talc to test, did they?

22 A. At some point we also received Cashmere Bouquet
23 and we've also received others. Avon, I believe; Jean
24 Nate, I think; certainly Chanel; and Beverly Hills --

25 Q. And by the way --

1 A. Giorgio Beverly Hills.

2 Q. By the way, you mentioned Avon. Is it your
3 opinion that all the Avon products that Ms. Schmitz
4 used had asbestos in them?

5 A. Based on our analysis of Avon products, I would
6 say more likely than not, yes.

7 Q. And, Doctor, on the very same day you were sent
8 the samples your lab purchased two bottles each of
9 Johnson's Baby Powder and Gold Bond; right?

10 You know what Gold Bond medicated powder is?

11 A. Yes, sir. I'm just trying to think. I think
12 you're correct.

13 Q. But you know -- or let me ask it this way: But
14 you knew from the very start, when you were hired, your
15 work was going to primarily involve Johnson & Johnson;
16 right?

17 A. That's what we were asked to test the most,
18 yes.

19 Q. Because it was clear to you the interest of
20 these plaintiff lawyers was in Johnson & Johnson --

21 MR. SATTERLEY: Objection, Your Honor.

22 THE COURT: Sustained.

23 BY MR. CALFO:

24 Q. In fact, almost one year after you got --

25 By the way, you got bottles of Cashmere Bouquet

1 in 2016 and 2017, didn't you?

2 A. 2017, yes, sir.

3 Q. Almost one year after you got the bottles of
4 Cashmere Bouquet and Gold Bond powder, you hadn't even
5 tested them after a year, had you?

6 A. No, I don't think so.

7 Q. Is that true?

8 A. That's true.

9 Q. And when these three plaintiff law firms came
10 to you -- and they paid you to test the Johnson's Baby
11 Powder; right?

12 A. Yes, sir. Like with all clients, when we agree
13 to do work, we -- we will bill them for our work.

14 Q. And when these three plaintiff law firms came
15 to you, Doctor, and they paid you to test the bottles
16 of Johnson's Baby Powder, they asked you to look for
17 amphiboles; right?

18 A. Yes, sir.

19 Q. And plaintiffs' attorneys didn't say to you,
20 look for asbestos or asbestiform amphibole, they just
21 told you to look for amphibole; right?

22 A. I'm trying to remember back. They were just,
23 you know, look to see if there's any regulated asbestos
24 in the product is what I believe happened. And that's
25 what we did. We didn't choose or pick what regulated

1 asbestos was in there. We just analyzed what was
2 there.

3 Q. Doctor, do you remember testifying in a case
4 called *Blinkinsop*?

5 A. Yes, sir, I think so.

6 MR. CALFO: Your Honor, just to make this --
7 we're getting to the end of the day -- may I show the
8 witness the testimony to see if it refreshes his
9 memory?

10 MR. SATTERLEY: Can I get a copy?

11 MR. CALFO: Of course. You can look at it.

12 THE COURT: What page are you showing?

13 MR. CALFO: I'm showing the witness page 215.

14 MR. SATTERLEY: 250?

15 MR. CALFO: 215.

16 BY MR. CALFO:

17 Q. Doctor, please just look at page -- lines 10
18 through 12, okay? And let me just ask you this,
19 Doctor: The plaintiffs' lawyers didn't ask you to look
20 for asbestos, they asked you to look for amphiboles;
21 right?

22 A. That's what it states, yes.

23 Q. And not all amphiboles are asbestos; true?

24 A. That's true.

25 Q. In fact, there are asbestos varieties that --

1 maybe I'll do it this way: You've seen the chart of --
2 have you -- well, let me -- let me publish what -- we
3 can't publish it until I get --

4 THE COURT: That's the one you used in opening
5 statement?

6 MR. CALFO: Yes, Your Honor.

7 THE COURT: You can publish it.

8 BY MR. CALFO:

9 Q. This is just for -- Doctor, I want you to help
10 us educate the jury real quickly, if we could.

11 Now, asbestos varieties are on the left and
12 nonasbestos varieties are on the right.

13 Do you see that, sir?

14 A. I see that's what it states.

15 Q. And, for some, the asbestos version and
16 nonasbestos versions have different names; right,
17 Doctor?

18 A. Yes, sir.

19 Q. So, for example, if we look on the right, the
20 nonasbestos form is called riebeckite and the asbestos
21 form on the left is crocidolite; right, Doctor?

22 A. That's what it states.

23 Q. And there are asbestos types of tremolite and
24 nonasbestos types of tremolite; right, Doctor? Just
25 generally.

1 A. Well, yeah, depending if it's just pieces of
2 rock of tremolite versus fibrous, that would be
3 correct.

4 Q. So let me just ask it. There are asbestos
5 types of tremolite, there are nonasbestos types of
6 tremolite; right, Doctor?

7 A. Yes. The same mineral, the same chemistry,
8 same everything except one is pieces of rock, the other
9 is fibrous.

10 Q. And sometimes the nonasbestos tremolite can be
11 referred to as common or massive tremolite; right?

12 A. Sometimes, yes.

13 Q. And sometimes nonasbestos tremolite can be
14 referred to as just tremolite; right?

15 A. Typically not, at least not in my area. When
16 you say "tremolite," you either have to define it as
17 tremolite nonasbestiform or cleavage fragment tremolite
18 or tremolite asbestos. Not called just "tremolite." I
19 don't agree with that.

20 Q. Well, let me -- let me just ask you this:
21 There are asbestos types of anthophyllite; true?

22 A. Fibrous anthophyllite, which is asbestos.

23 Q. And nonasbestos types of anthophyllite; true?

24 A. True if it is, in fact, pieces of cleavage
25 fragment, not fibrous, that's true.

1 Q. And so, Doctor, if you were asked to look for
2 amphiboles and not asbestos, what you were asked to do
3 is look for any of the amphiboles, not just on the left
4 side but also the nonasbestos versions; right?

5 A. We looked to characterize it if it had cleavage
6 fragments versus asbestos. We -- we characterize what
7 is present. Not just looking for one thing or the
8 other.

9 Q. Well, staying with this chart, you also were
10 not asked to look for chrysotile asbestos, were you?

11 A. It's been too long. I just don't recall.

12 Q. Maybe we can talk about that tomorrow, because
13 we've got four minutes.

14 Now, Doctor, we've heard and will likely hear
15 of testing --

16 MR. CALFO: And maybe, since we don't have
17 time, I'll move on, Your Honor.

18 THE COURT: It's your cross-examination.

19 MR. CALFO: So I move to strike the question.

20 BY MR. CALFO:

21 Q. Doctor, you've analyzed about a hundred bottles
22 of Johnson's talcum powder; right?

23 A. 107.

24 Q. And you've never reported finding any
25 chrysotile; right?

1 A. That's correct. You wouldn't for this -- using
2 this protocol.

3 Q. And that's because one of the drawbacks of the
4 concentration method -- or I think you called it the
5 Blount method; is that right?

6 A. Well, there's the concentration method, Blount
7 PLM, and then ISO 22262-2 is the talc heavy density
8 liquid method for PLM, TEM, and SEM.

9 Q. So where I'm going with this is one of the
10 drawbacks of the concentration method is you can't find
11 chrysotile; right?

12 A. That's correct.

13 Q. So now, I think you also conduct PLM tests
14 without the concentration method; is that true?

15 A. That's true.

16 Q. And to this day, using that method, you still
17 haven't found chrysotile in the Johnson's talc; true?

18 A. That's true.

19 Q. And one thing I think you criticized Johnson &
20 Johnson for doing was not adopting the concentration
21 method. Right?

22 A. That's right.

23 Q. To this day, the concentration method has not
24 been adopted or approved by any regulatory agency in
25 the United States; right, Doctor?

1 A. That is correct.

2 Q. That would include the EPA; right?

3 A. Heavy density liquid they don't recommend, but
4 they do have other concentration methods that they have
5 laid out from acid dissolution to remove soluble
6 materials to muffle furnace to remove polymer or
7 plastic-type materials. So it concentrates, just not
8 heavy liquid density.

9 Q. That would include the Mine Safety and Health
10 Administration; correct, Doctor?

11 A. That is correct.

12 Q. And that would include the Occupational Safety
13 and Health Administration, or OSHA; true?

14 A. That is true.

15 Q. All right.

16 MR. CALFO: Your Honor, I'm going into a new
17 area. Would this be an appropriate time? I hate to
18 ask the Court, but I am --

19 THE COURT: We'll go home on that one.

20 MR. CALFO: Thank you, Your Honor.

21 THE COURT: Ladies and gentlemen, we're going
22 to end for the day. We'll see you back here tomorrow
23 morning. We'll get started again with the
24 cross-examination of this same witness.

25 Have a pleasant evening. Don't forget the

1 admonition that it's your duty as jurors not to
2 converse amongst yourselves or with anyone else on any
3 subject connected with the trial or to form or express
4 any opinion thereon until the matter is submitted to
5 you.

6 Have a pleasant evening.

7 (Whereupon, the following proceedings were held
8 outside the presence of the jury:)

9 THE COURT: The jurors have departed the
10 courtroom.

11 THE WITNESS: Your Honor, may I be excused?

12 THE COURT: Until tomorrow. You've got to be
13 back here.

14 THE WITNESS: Oh, I'll be back.

15 MR. SATTERLEY: Leave everything except your
16 report -- anything you brought you can take with you.
17 Anything that was presented to you, leave it.

18 THE WITNESS: It's right here. I haven't taken
19 any of that.

20 THE COURT: All right. Is there anything we
21 need to put on the record regarding today's proceeding?

22 MR. SATTERLEY: The only thing, at the end of
23 the day, Your Honor said, the Scala exhibits --

24 THE COURT: We'll get to that.

25 Mr. Calfo, Mr. Sharp, is there anything we need

1 to put on the record?

2 MR. GARY SHARP: No, Your Honor.

3 MR. MULARCZYK: No, Your Honor.

4 THE COURT: All right. Let's move on to the
5 exhibits that Mr. Satterley would like to offer into
6 evidence.

7 What would you like to offer into evidence,
8 Mr. Satterley?

9 MR. SATTERLEY: I'm sorry?

10 THE COURT: What would you like to offer into
11 evidence?

12 MR. SATTERLEY: Your Honor, I apologize. I
13 don't have at my fingertips the disputed exhibits here.
14 Yes.

15 The disputed exhibits are Trial Exhibit 3573,
16 3574, 3577, 3578, 3580, 3581, 3582, 3588, 3590, 3592,
17 3593, 3594, 3595, 3596, 3597, 3599, 3600, 3601, 3603.
18 3604, and 3611.

19 THE COURT: All right. You can keep that.

20 MR. MULARCZYK: Do you have a set of the
21 documents to look at as we go through each one? Okay.

22 THE COURT: All right. Do you have any
23 objection to those?

24 MR. MULARCZYK: Yes, Your Honor. It would help
25 me -- I don't have that list in front of me. I have

1 the ones that we've submitted objections to based on
2 the exhibit number for the deposition. If we could
3 go --

4 THE COURT: I can coordinate.

5 Number 6 on the Scala deposition is 3573.

6 MR. MULARCZYK: Correct. Our objection to this
7 is based on authenticity, hearsay, and relevance.

8 THE COURT: All right. First -- the first
9 thing is that -- authenticity. The witness testified
10 that this is a document from the National Safety
11 Council but claimed that she'd never seen it before.

12 MR. MULARCZYK: And part of the problem with
13 almost all of the documents to which we've objected to
14 is exactly that position. They were documents that
15 were put in front of her that she'd never seen before,
16 and so --

17 THE COURT: I understand. Ms. Clancy or
18 Mr. Satterley, what is the authenticity that has been
19 demonstrated to the Court regarding Exhibit 3573?

20 MR. SATTERLEY: Your Honor, this was produced
21 by Colgate in response to discovery, number one.
22 Number two, we cite to the Evidence Code 1414. It's
23 authentic because it's in a monthly periodical and
24 Colgate has admitted that they're continuously a member
25 of the National Safety Council since 1911. We believe

1 that, because it was in a monthly periodical, that is a
2 presumption of authenticity. And so we believe this is
3 admissible. And we cite to, I think, in our -- the
4 *Greenspan* case and also to the *StreetScenes v. ITC*
5 *Group* case, 103 Cal.App.4th 233. As well as Evidence
6 Code Section 645.

7 THE COURT: Okay. You're mixing more than just
8 authenticity here. That's okay.

9 Mr. Mularczyk, why isn't this a document that
10 was in the possession of your client who was a member
11 of the organization that published this document and
12 why isn't it relevant to show what they knew and when
13 they knew it?

14 MR. MULARCZYK: Well, to address the first
15 point, nothing that Mr. Satterley said is actually
16 evidence. There is -- nobody has testified that this
17 was a monthly periodical, that Colgate was receiving
18 it, that Colgate was aware of it. This was a document
19 that was passed in front of Ms. Scala for the first
20 time in front of her deposition, and then --

21 THE COURT: I understand. She's testifying for
22 Colgate, and it was in Colgate's possession, but she'd
23 never seen it before.

24 MR. MULARCZYK: Nobody has said that. There's
25 been no evidence --

1 THE COURT: Mr. Satterley just told me that it
2 was produced by Colgate in the production of documents.

3 MR. MULARCZYK: As an attachment to the
4 exhibit. As an exhibit to her deposition transcript.
5 We produced her deposition transcript in the exhibit
6 that was attached to it.

7 What's important --

8 THE COURT: Oh, all right. Let me get that
9 straightened out.

10 Mr. Satterley, was this produced by Colgate in
11 a request for production of documents or was this
12 produced by you at the deposition and then?

13 MR. RIVAMONTE: Your Honor, Ian Rivamonte for
14 the plaintiff. It was produced by Colgate in response
15 to plaintiff's document requests as set forth in our
16 brief.

17 MR. MULARCZYK: Let me make something clear.
18 The document production --

19 THE COURT: You had it in your possession to
20 produce it; right?

21 MR. MULARCZYK: We received this because we had
22 a copy of her transcript with the exhibits attached to
23 her transcript. That's how we received a copy of this.
24 I think it's --

25 THE COURT: Wait. I'm hearing two different

1 things. I'm hearing that the lawyers for Colgate
2 brought it to Ms. Scala's deposition.

3 MR. MULARCZYK: No.

4 THE COURT: Isn't that what you just told me?

5 MR. RIVAMONTE: No, Your Honor. During
6 Ms. Scala's deposition, it was the plaintiffs' counsel
7 in that case. The *Polakow* case that brought it.

8 THE COURT: I don't much care who produced it.
9 Unless it was Colgate.

10 MR. RIVAMONTE: Colgate did produce it,
11 Your Honor, in response to plaintiff's discovery
12 request in this case.

13 THE COURT: Got it. Okay.

14 All right. Mr. Satterley, how is this an
15 authentic document?

16 MR. SATTERLEY: Well, we -- number one, we
17 believe that they produced --

18 THE COURT: They haven't admitted it.

19 MR. SATTERLEY: No, I don't believe they have
20 admitted it. We believe that they produced it in
21 response to our discovery request asking to produce all
22 documents regarding what they knew or should have
23 known, and they produced this document.

24 They should have or could have as -- not
25 produced it and said they didn't. It's not a document.

1 It is a periodical. The Court -- you know, there's --
2 I apologize, Mr. Rivamonte, I've been working
3 with Dr. -- asking questions of Dr. Longo all day, so
4 my mind's -- beside myself right now. Can you help me
5 out.

6 MR. RIVAMONTE: Yes, I can.

7 May I, Your Honor?

8 THE COURT: Sure. Of course.

9 MR. RIVAMONTE: So Evidence Code Section 645.1
10 has a presumption that a periodical published more than
11 regular issue in average intervals not exceeding three
12 months is presumed authentic.

13 Here, Your Honor, Exhibit 35' -- I believe it's
14 3573 or Scala Exhibit 6, if you look at the contents
15 page of that, if you look at my trial brief, the
16 plaintiff's trial brief, my declaration, Exhibit E, the
17 contents page says that it's a monthly periodical of
18 the National Safety Council. Therefore, under Evidence
19 Code 645.1, there is a presumption that it is authentic
20 and now the burden shifts to Colgate to prove that it
21 is not.

22 THE COURT: All right. Presuming that it's an
23 authentic periodical, how is it relevant when the
24 corporate representative testifies that she doesn't --
25 she's never seen it before? Colgate has never seen it

1 before.

2 MR. SATTERLEY: Knew or -- okay.

3 MR. RIVAMONTE: Your Honor, it is relevant to
4 know this. In *People v. ConAgra*, *ConAgra* was -- for
5 example, in that case, *ConAgra* was a member of several
6 trade organizations. Those trade organizations issued
7 periodicals and other reports about the hazards related
8 to *ConAgra's* product. In that case the appellate court
9 found that, for the purposes of notice, those -- those
10 publications from those trade organizations in which
11 *ConAgra* belonged in is deemed notice of knowledge of
12 the actual hazard in the product. Here it is the same
13 thing. National Safety Council, Colgate was a member
14 and therefore there is at least notice here since
15 Colgate was a member that -- of asbestos-related health
16 hazards as set forth in that National Safety Council
17 publication.

18 THE COURT: Well, how do you bridge the gap
19 between the witness testifying for Colgate that says
20 that Colgate's never seen this before, that they didn't
21 have it in their possession?

22 MR. RIVAMONTE: Under --

23 THE COURT: In *ConAgra* they had all that stuff
24 in their possession, didn't they?

25 MR. RIVAMONTE: Yes. But in

1 *Anderson v. Owens-Corning*, the standard is knew or
2 should have known. So even though -- if Ms. Scala
3 claims that she does not -- or Colgate does not know of
4 this document in particular, it should have known it
5 based on its membership in the National Safety Council
6 during that time.

7 Colgate was a member of that council for, I
8 think since its inception, if I recall correctly.

9 And Colgate was also a member of several
10 committees in the National Safety Council, some of
11 which relate to asbestos, as I recall correctly.

12 So, for that reason, Your Honor, it's a
13 should-have-known standard. Knowledge would be great.
14 Actual knowledge would be fantastic, but we're not --
15 for purposes of notice and purposes of
16 *Anderson v. Owens-Corning*, the should-have-known
17 standard applies.

18 THE COURT: Is that correct about Owens' claim?

19 MR. MULARCZYK: No, Your Honor. You can't --
20 the way it works with authenticity and with the known
21 or knowable standard is you can't simply make the
22 argument and say so and then that's the case. That's
23 not how it works. You actually have to submit evidence
24 and make a connection between the defendant and the
25 topic or the harm or the injury that they should or

1 should have been aware of. There is nothing in this
2 document, there is no evidence that's been presented in
3 this case that Colgate had receipt of this document,
4 that this document should have told Colgate anything or
5 that it should have advised him of any harm or injury.
6 There's just no connection here. There's nothing at
7 all.

8 MR. GARY SHARP: Your Honor, if I might,
9 because I've been around forever, I know these
10 documents from a historic state-of-the-art standpoint.
11 It's not true. Colgate is not mentioned anyplace in
12 any of the National Safety Council pages, either by way
13 of membership, either by way of board of directors,
14 either by way of membership on a committee. If
15 Mr. Rivamonte can show us that we were on a committee,
16 then we can have that discussion. I've never seen it.

17 We have a list of every publication that was
18 maintained by Colgate, which was attached to the
19 deposition as Exhibit Number 5, which has been admitted
20 into evidence, the National Safety Council or the
21 *National Safety News* does not appear on this list.

22 These were not within Colgate's possession.

23 THE COURT: All right. The objection is going
24 to be sustained on this one.

25 Let's move to the next one, 3574, Number 7.

1 MR. MULARCZYK: The same.

2 MR. GARY SHARP: Same objection.

3 MR. RIVAMONTE: Your Honor, I would like to
4 reiterate here. At this stage we're talking about
5 authenticity. And it's a very low standard. The
6 question is whether the document produced or at issue
7 is fake.

8 THE COURT: The difficulty is that you have --
9 you may have a document that is an authentic newspaper
10 article, but you have a witness from the company saying
11 that they never saw it before, that the company had
12 never seen it before. That's the -- the difficulty is
13 not so much that it's -- it says that it's a magazine
14 article and, on the face of it, it says that it's
15 published more than X-number of times. But the problem
16 here is that there's evidently no evidence that Colgate
17 had it in their possession so that they can be charged
18 with having knowledge of what it said.

19 Maybe that wouldn't be true for *The New York*
20 *Times*, but for something like this, I'm going to
21 sustain the objection to that one as well.

22 Moving on. Your next one is 3577. The
23 objection is sustained on that one. That's my motion
24 in limine. Actually, let's go back.

25 Do you want to argue that one?

1 MR. MULARCZYK: Well, Your Honor, I would...

2 MR. GARY SHARP: Again, Your Honor, we have
3 within our documents the volumes of the *New England*
4 *Journal of Medicine* that we maintained. It was well
5 after this date. We did not have this. It was not in
6 the possession of Colgate, and, again, there was no
7 reason for us to have had this document. Ms. Scala was
8 not aware of it until it was presented to her at
9 deposition.

10 MR. MULARCZYK: And, yes, this was the subject
11 of the motion in limine.

12 THE COURT: How does this -- we made a ruling
13 on the motion in limine that there would not be
14 children dying of inhalation of talcum powder, of
15 aspiration of talcum powder. The motion -- the
16 objection is sustained for 3577.

17 The next one is 3578, which is Number 11.

18 MR. GARY SHARP: Again, National Safety
19 Council, Your Honor.

20 THE COURT: And it was -- and the witness was
21 emphatic that this was not received by Colgate.

22 MR. RIVAMONTE: I stand by my previous
23 arguments, Your Honor.

24 THE COURT: So that's sustained as well.

25 The next one is 3580, an article from *The New*

1 *York Times*.

2 It's certainly relevant.

3 MR. GARY SHARP: Your Honor, we have no
4 objection.

5 THE COURT: All right. That one will be in
6 evidence.

7 (Whereupon, Plaintiff's Exhibit 3580 was
8 admitted into evidence.)

9 THE COURT: The next one after that is 3581,
10 which is -- corresponds to Number 14, which is -- which
11 are OSHA rules and regulations, which is -- it's the
12 law.

13 What would be your objection?

14 MR. GARY SHARP: Your Honor, with respect to
15 OSHA, I have no objection as long as the entire code
16 section is attached.

17 THE COURT: Now, this is...

18 MR. SATTERLEY: Well, wait a second. I would
19 object --

20 THE COURT: It's three pages long.

21 MR. SATTERLEY: I would object to them
22 putting --

23 THE COURT: Hold on.

24 The exhibit is the exhibit.

25 Do you have an objection to the way the exhibit

1 exists at this point in time? Is it only part of an
2 exhibit that includes other relevant, pertinent
3 material?

4 MR. GARY SHARP: Your Honor, if we can meet and
5 confer with plaintiffs. The problem is the copy I have
6 I can't read it, and I think between us we should be
7 able to come up with a clean copy.

8 THE COURT: Maybe you should just let it go.
9 The jury won't be able to read it either.

10 MR. GARY SHARP: That is absolutely true and...

11 THE COURT: In any event, I don't mind letting
12 him talk about it, and if you want to get a cleaner
13 copy, Mr. Satterley, you can do that.

14 MR. GARY SHARP: Thank you, Your Honor.

15 THE COURT: The next one is 3582, corresponding
16 to Number 15. What's the objection to this?

17 MR. MULARCZYK: Hearsay, Your Honor. It's
18 just -- it's a report of finding by Dr. Lewin in
19 testing that he had done, so we object on the basis of
20 hearsay.

21 THE COURT: All right.

22 (Whereupon, Plaintiff's Exhibit 3582 was marked
23 for identification.)

24 MR. RIVAMONTE: Your Honor, this letter is
25 admissible under the hearsay rules. Number one, it's

1 an ancient document. It's over 30 years old. In the
2 *ConAgra* case again, the authors of this document is
3 presumed to have known what they were talking about and
4 it's been typically relied upon. And, number two, it's
5 also admissible under the official -- the government
6 records hearsay exception because this was a document
7 drafted by the FDA and it's between two FDA employees.
8 So under, I believe it's 1271, it is admissible for
9 that purpose -- I'm sorry, 1280.

10 THE COURT: It wasn't drafted by the FDA. It
11 was directed to the FDA. It was drafted by Seymour
12 Lewin, a professor of chemistry someplace.

13 MR. RIVAMONTE: Let me check, Your Honor.
14 3583, Your Honor.

15 MR. SATTERLEY: No. 3582; right?

16 THE COURT: This is 3582.

17 MR. SATTERLEY: 3582. Exhibit 15.
18 Here it is.

19 MR. RIVAMONTE: So, Your Honor, this is also
20 admissible for notice purposes because this document
21 was produced by Colgate and it was in Colgate's
22 possession at the time.

23 THE COURT: It was produced by Colgate in
24 the --

25 MR. RIVAMONTE: Response to discovery,

1 Your Honor.

2 THE COURT: All right. Is that right, that
3 Colgate had this document in their possession?

4 MR. MULARCZYK: No. Again, this is information
5 that was received during the course of depositions of
6 corporate -- corporate witnesses, so -- here's my --

7 Here's another take I have on this, Your Honor.

8 So there was a follow-up -- two follow-up
9 studies that were done, one by Dr. Lewin and one by the
10 FDA, on these exact same samples that they want to
11 introduce into evidence now.

12 So to the extent they're asking for this one to
13 be admitted, there are two follow-ups that say the
14 complete opposite in his final rulings that should be
15 admitted as well.

16 So to the extent that the Court is inclined, if
17 this comes in, then it certainly opens the door to all
18 of it, but our position -- the position we're
19 maintaining is that this was produced as part of
20 deposition transcripts when these documents were shown
21 to corporate representatives at depositions. What we
22 produced were the transcripts along with the exhibits
23 that were previously produced by plaintiffs. These
24 were not in possession of Colgate prior to that time.

25 So, in our view, that's the position we

1 maintain, but -- leave it at that.

2 THE COURT: All right.

3 MR. SATTERLEY: I just want to verify. So it's
4 Colgate's position that, even though it's produced in
5 response to discovery with the Quinn Emanuel Bates
6 Number QECPC2, and it has several numbers, it's
7 Colgate's position that those Bates numbers don't mean
8 anything, and I just want to clarify that's Colgate's
9 position with regard to this because it was our
10 understanding that that came from the repository with
11 the Bates numbers on it. But now Colgate has taken a
12 new position I've never heard of before.

13 THE COURT: Well, I am just trying to figure it
14 out here. Did this...

15 MR. GARY SHARP: Your Honor.

16 THE COURT: Which is it?

17 MR. GARY SHARP: So, under discovery
18 obligations, a --

19 THE COURT: I understand that. The question
20 is --

21 MR. GARY SHARP: What we received in the course
22 of litigation these were not in the Colgate files.
23 These were received during the course of litigation by
24 counsel and then were attached to depositions where
25 people have been asked about them.

1 THE COURT: All right. Mr. Satterley?
2 Mr. Satterley, did you receive this as a business
3 record or just one of those general "all documents that
4 you may have"?

5 MR. SATTERLEY: Well, Your Honor, they were
6 produced in response to our discovery and I -- you
7 know, it sounds like its Colgate's position that
8 there's no identifying marks or numbers or Bates
9 numbers that would demonstrate what they are. So we
10 believe that it's -- the one that I have -- I have one
11 with Bates numbers on them. His copy doesn't have
12 Bates numbers on them. Mine has Quinn Emanuel Bates
13 numbers on them.

14 MR. GARY SHARP: And, Your Honor, in the --

15 MR. SATTERLEY: So it's my -- other Colgate
16 counsel told me in the past that if it has the Quinn
17 Emanuel Bates numbers on it, it's part of their
18 repository, but it's now Colgate's taken the position,
19 that's fine. That just puts me on notice where they
20 are with regards to other documents, so.

21 THE COURT: All right. So I'm going to accept
22 as true that they did not have this document back in
23 1972.

24 MR. SATTERLEY: If we prove otherwise, we'll
25 bring it to the Court for reconsideration.

1 THE COURT: All right. And so that one the
2 objection is sustained.

3 The next one is 3588, which corresponds to 21,
4 which is the CTFA minutes.

5 What's the objection to this?

6 MR. GARY SHARP: Your Honor, this is a CTFA
7 document. We're not going to challenge authenticity
8 because I'm assuming at some point somebody from the
9 CTFA has probably produced this. It was not a document
10 that was ever in the Colgate files. This document
11 actually came from Whittaker Clark & Daniels. We are
12 not challenging authenticity, though, however.

13 THE COURT: Wasn't the testimony that Colgate
14 was involved with this CTFA?

15 MR. GARY SHARP: Yes. Colgate was a member of
16 the CTFA. This happens to be something that Colgate
17 was not present at and there is no indication that this
18 document was ever sent to and/or received by Colgate.

19 MR. MULARCZYK: And, as a matter of course, we
20 stipulate on the CTFA documents where it indicates we
21 were present. We don't dispute those. The ones that
22 raise concern for us are the ones in which we weren't
23 present.

24 THE COURT: All right. I am persuaded that it
25 should be allowed in. So the objection is overruled.

1 (Whereupon, Plaintiff's Exhibit 3588 was
2 received into evidence.)

3 The next one is 3590, which corresponds to 23.

4 MR. RIVAMONTE: This is another CTFA document,
5 Your Honor. It's a news release.

6 THE COURT: Is there an objection to this one?

7 MR. GARY SHARP: Other than your name is on it.
8 But no, Your Honor.

9 THE COURT: I also find that objectionable.

10 MR. GARY SHARP: Let the record reflect there
11 was laughter in the courtroom.

12 THE COURT: That one will be in evidence.

13 (Whereupon, Plaintiff's Exhibit 3590 was
14 received into evidence.)

15 THE COURT: The next one is 3592. The Sinai
16 study.

17 What's the objection to this one?

18 MR. MULARCZYK: Same thing as for Dr. Lewin.
19 It's hearsay.

20 MR. SATTERLEY: Well, Your Honor, this is --
21 this goes to notice, exception to the hearsay rule,
22 issue of notice. This is a published study regarding
23 the very product at issue in this case, that the
24 corporate representative admitted that they knew that
25 it was going on at the time, and this, at the very

1 least, should come in for the issue of notice.

2 MR. RIVAMONTE: Similar to *The New York Times*
3 article, Your Honor. This is a publication in a
4 medical journal -- or a scientific journal, I should
5 say.

6 MR. SATTERLEY: *Journal of Toxicology and*
7 *Environmental Health*.

8 THE COURT: It's really a question of whether
9 they had notice at the time, and I'm persuaded that
10 they had notice at the time.

11 MR. GARY SHARP: Your Honor, if I might, this
12 is similar to every medical article which might come up
13 in a trial with respect to medical, and they're
14 referred to, certainly. They're quoted from. They
15 don't come into evidence because they're still
16 inadmissible hearsay.

17 THE COURT: I don't disagree with that, but the
18 distinguishing factor is that with the Sinai group it
19 was a *New York Times* article and then there was
20 interaction between the industry group and the people
21 who wrote the article.

22 MR. GARY SHARP: Certainly.

23 THE COURT: And that's where it distinguishes
24 this, that it was a bone of contention and it was
25 maneuvering, if you will, around what was -- what was

1 printed.

2 MR. GARY SHARP: Well, again, Your Honor, what
3 we're doing is we're now sending back to the jury room
4 to lay people medical or scientific articles that have
5 been testified to by the experts and have been
6 explained by the experts. We don't send the textbooks
7 or the articles back to the jury room.

8 THE COURT: I agree with that. This isn't one
9 of those.

10 MR. GARY SHARP: Thank you, Your Honor.

11 THE COURT: This is something that was
12 published, that the industry group addressed it. And
13 it's the fact that the industry group addressed it that
14 makes it what's in there. And it is hearsay, no
15 question about it. But it goes to notice, not to the
16 truth of the matter.

17 MR. GARY SHARP: Thank you, Your Honor.

18 THE COURT: So that's 3592 -- and, actually,
19 3593 can both be admitted into evidence, because I'm
20 going to presume that it is the same.

21 (Whereupon, Plaintiff's Exhibit 3592 was marked
22 for identification.)

23 (Whereupon, Plaintiff's Exhibit 3593 was
24 received into evidence.)

25 MR. GARY SHARP: And that's for notice only;

1 correct, Your Honor?

2 THE COURT: The next one is 3594, which is 27.

3 MR. MULARCZYK: So the objection to this,
4 Your Honor, it is hearsay within hearsay. It's a
5 document that purports to describe a telephone
6 conversation.

7 MR. GARY SHARP: Again, it's not a Colgate
8 document and it's never appeared in the Colgate files.

9 THE COURT: We have somebody, looks like it's
10 named Shapiro, and we have Langer. Beyond a doubt,
11 it's a hearsay document; right?

12 MR. RIVAMONTE: Your Honor, in our trial brief
13 we submitted a declaration from the custodian of
14 records from the FDA, and that declaration
15 authenticates this document, number one; and, number
16 two, confirms that this document was kept in the
17 regular course of the FDA.

18 So in that sense, Your Honor, it's admissible
19 as a business record, under the business record
20 exception. It's also --

21 THE COURT: This is a government record?

22 MR. RIVAMONTE: It is maintained as a
23 government record, yes, Your Honor. It's part of the
24 FDA files as a declaration from the FDA. It's attached
25 as an exhibit.

1 THE COURT: So it's an FDA business record.

2 MR. RIVAMONTE: Yes. It was kept in the
3 regular course of the FDA's business.

4 THE COURT: Where is the evidence that shows
5 that?

6 MR. RIVAMONTE: Let me look it up, Your Honor.

7 MR. SATTERLEY: The declaration we submitted, I
8 believe.

9 MR. RIVAMONTE: It was part of the trial brief.
10 It was in my declaration. I will give you the exact
11 exhibit number.

12 THE COURT: All right. If it's a business
13 record and it's been authenticated by a declaration.

14 MR. MULARCZYK: Well, it seems like that only
15 addresses the first layer of hearsay and not the
16 underlying telephonic conversation. The business
17 record exception is that it actually exists only
18 applies to the document itself. It doesn't apply to
19 the second layer of hearsay within the document which
20 describes the underlying telephonic conversation, which
21 is actually the title of the document itself.

22 MR. RIVAMONTE: Your Honor, just for the
23 record, it's Exhibit V as in Victor to my declaration.
24 It is a declaration of Tobin Ballinger, and in that
25 declaration, in that Exhibit B, there is an

1 authentication page by the FDA certifying that this
2 document, along with others, is part of -- maintained
3 in the regular course of the FDA's business.

4 In terms of the --

5 THE COURT: You didn't -- did you subpoena the
6 document to court and -- with the declaration by the
7 custodian?

8 MR. RIVAMONTE: It was a FOIA request done by
9 my office and when the request was made --

10 THE COURT: All right. So it's a Freedom of
11 Information Act request and they sent it back saying
12 these are the documents we have.

13 MR. RIVAMONTE: Yes, Your Honor.

14 THE COURT: That's insufficient to authenticate
15 it. If you have a declaration of a custodian as would
16 come with documents that were subpoenaed to the Court
17 for trial, that would take care of the problem in terms
18 of authentication.

19 And that they also say that it's made in the
20 regular course and scope of business with the other
21 necessary assertions, it can get past the hearsay
22 objection. But it -- but I'm going to sustain the
23 objection on this one. I don't see that having
24 occurred.

25 The next one is 3595, which is the submission

1 to the FDA.

2 MR. MULARCZYK: So, again, our objection to
3 this is authenticity.

4 THE COURT: How many pages are on this one?

5 MR. RIVAMONTE: It consists of two documents,
6 Your Honor. I think we only want -- it's kind of weird
7 because in the copy, as you'll see, there's one --
8 there's two documents per page.

9 THE COURT: Yes. I have four documents
10 altogether plus a page that does not make sense to me.
11 It says "remote user." That's right. Remote user.

12 MR. RIVAMONTE: So, Your Honor, we want the
13 McCrone document, which is dated March 12, 1976.
14 That's two pages.

15 And then we want the Johnson & Johnson --

16 THE COURT: Well. All right.

17 MR. RIVAMONTE: There's three documents total,
18 total of four pages.

19 THE COURT: There has been testimony that these
20 were the documents that were sent by the trade group,
21 the CTFA, in order to influence the FDA; isn't that
22 what the testimony was?

23 MR. MULARCZYK: I don't recall that testimony,
24 Your Honor. And I would -- one is a Johnson & Johnson
25 document. One is a McCrone document that wasn't a

1 communication with Colgate. I think we have challenges
2 to authenticity as to both. We have challenges to
3 hearsay as to both. And I believe one of the documents
4 actually discusses a -- the McCrone document also seems
5 to reference a verbal agreement that was made, so
6 there's a multiple hearsay layer issue with respect to
7 the McCrone document.

8 THE COURT: Well, my recollection of testimony,
9 and I'm blanking out at the moment as to who gave the
10 testimony, was that the trade group put together a
11 package of letters regarding the incorrect assertions
12 in the Sinai Medical School study and it was sent to
13 the FDA. But maybe I'm not correct about that.

14 MR. SATTERLEY: I think you're correct. Diana
15 Scala testified about that. And also there's testimony
16 that hadn't already been played from Mr. Hopkins on
17 that -- in that regard.

18 THE COURT: Maybe it was Mr. Hopkins'
19 testimony. I don't remember exactly whose testimony it
20 was. But that's my recollection. And if that's --
21 if -- with that testimony underpinning this, I will
22 admit it into evidence.

23 The next one is 3596, the CTFA minutes.

24 MR. MULARCZYK: Your Honor, just as a
25 clarification on the last one, which document are you

1 admitting? Or subject to the testimony, because
2 there's a few in there.

3 THE COURT: There's -- there are three letters.

4 MR. MULARCZYK: Okay.

5 THE COURT: And one of them is from Johnson &
6 Johnson, one of them is from McCrone, and one of them
7 is from Sterling Drug. And the other page that says
8 "remote user," I don't know what that means.

9 Mr. Satterley?

10 MR. MULARCZYK: It has a little note --

11 MR. SATTERLEY: We don't need that.

12 MR. MULARCZYK: I think that's a little note
13 left by the plaintiff's attorney.

14 MR. SATTERLEY: I don't, but we don't -- we
15 won't seek the admission of that, Your Honor.

16 THE COURT: All right. We're going to tear
17 that out.

18 MR. MULARCZYK: Just like that.

19 THE COURT: Just like that. All right.

20 MR. MULARCZYK: We'll -- and we'll -- we'll
21 check the -- we'll go back and check the testimony
22 that's underpinning the admission of these, and -- and
23 we'll circle back with the Court in the morning.

24 THE COURT: All right. 3596, CTFA minutes. If
25 you have no different objections, I'm going to admit

1 that.

2 MR. GARY SHARP: Your Honor, what tab? I'm
3 sorry.

4 MR. SATTERLEY: 29, Mr. Simko. Colgate was
5 present, so --

6 MR. MULARCZYK: Yeah, we'll withdraw the
7 objection.

8 THE COURT: All right. That one will be in.
9 (Whereupon, Plaintiff's Exhibit 3596 was
10 received into evidence.)

11 THE COURT: The next one as well? 3597, which
12 is 30, which -- oh, maybe I'm confusing the letters.

13 MR. GARY SHARP: Yes. I -- now -- now that I
14 see this, I -- I believe that is what happened,
15 Your Honor.

16 MR. SATTERLEY: Yeah. This is the -- this is
17 the March submission to the FDA enclosing all the
18 industry members of the CTFA, and there was
19 testimony -- specific testimony about this, about
20 Christopher Costello working for Colgate.

21 THE COURT: These are the same letters as in --
22 except there's more of them here.

23 MR. SATTERLEY: That's correct.

24 MR. MULARCZYK: Can I -- can I get back to the
25 Court on this in the morning again, just review the

1 testimony?

2 THE COURT: All right. Is there one from
3 Colgate?

4 MR. SATTERLEY: There's -- I have one --
5 there's a -- a letter and an internal -- a memo that
6 was submitted to the FDA; March 15, 1976, letter from
7 Costello to Norman Estrin, and Norman Estrin turns
8 around and submits all of this to the FDA.

9 MR. GARY SHARP: And, Your Honor, no objection
10 to those portions.

11 THE COURT: Well, the document is what the
12 document is. If you have objections to other portions,
13 we are going to deal with it, but first, let me do
14 this.

15 3595 I'm going to strike from being admitted
16 into evidence, because it's going to be duplicated
17 3597. So 3595 is out because it's a duplication.

18 3597 will be in, but the Court will reconsider
19 it if Mr. Mularczyk can find some evidence that nobody
20 talked about it.

21 (Whereupon, Plaintiff's Exhibit 3597 was
22 received into evidence.)

23 MR. MULARCZYK: I'm not -- I'm not looking for
24 a way out. I just want to confirm what the --

25 THE COURT: All right. The next one is 3599,

1 Exhibit Number 32. It's a memorandum from HEW,
2 somebody there, to Robert Schaffner.

3 MR. GARY SHARP: Yes, Your Honor. Again, this
4 is an internal FDA document that has not been
5 authenticated.

6 MR. MULARCZYK: We object on that and on
7 hearsay.

8 MR. RIVAMONTE: Your Honor, this is one of the
9 documents that the FDA produced in response our FOIA
10 request. It's Exhibit V, as in Victor, to my
11 declaration in the trial brief.

12 THE COURT: Yeah. I think it's -- I don't
13 remember what the witness, Diana Scala, said about it.
14 Do you?

15 MR. GARY SHARP: It was just read to her,
16 Your Honor.

17 THE COURT: All right. It's not in evidence.
18 Then we have 3600, which is 33.

19 MR. GARY SHARP: Yes, Your Honor. In this --
20 this next series are allegedly to be call reports
21 that -- they're Cyprus documents. They are not Colgate
22 documents. They did not appear in Colgate files.

23 THE COURT: Well, the testimony, if I recall,
24 is that the witness said that Cyprus mailed these
25 things in an offer -- in attempting to solicit business

1 from Colgate.

2 MR. GARY SHARP: No. Let me rephrase that,
3 Your Honor.

4 The testimony from Ms. Scala was -- again,
5 these were simply put in front of her, and she was --
6 they were read to her. These are -- nothing with
7 respect to Colgate or Colgate employees would verify
8 anything that's in this document from Cyprus.

9 And, again, this is a hearsay within hearsay,
10 because they purport to be conversations that took
11 place by a gentleman at Cyprus, who, apparently, was in
12 sales, and they've memorandums to his boss at the time
13 that they were attempting, apparently, to gain
14 Colgate's business, which they were not able to do
15 until they bought the company.

16 MR. SATTERLEY: Your Honor, first of all, many
17 of these documents have statements of what Colgate
18 personnel managers said. Those would be party
19 admissions, the portions of the documents. The
20 documents themselves have been authenticated --

21 THE COURT: They would be party admissions if
22 somebody was standing here to testify that "They told
23 me."

24 But what we have is a document that was written
25 a long time ago, and the witness that talked about the

1 document, if at all, doesn't say that "Somebody told
2 me."

3 MR. SATTERLEY: These --

4 THE COURT: That's a difficult problem from the
5 perspective of saying that it's a -- it's an admission.

6 MR. SATTERLEY: These documents were all
7 produced as business records by Cyprus. We have
8 testimony from the Cyprus corporate representative we
9 could tender -- tender to Your -- to Your Honor, if we
10 haven't already done so.

11 MR. RIVAMONTE: We have.

12 MR. SATTERLEY: And so these are business
13 records from 19 -- this one is from 1976, and so we can
14 authenticate these as business records, and there are
15 statements of -- of a party within the business record.

16 And it would be just -- if they had a record of
17 Ms. Schmitz --

18 THE COURT: I don't have a problem with this
19 being a business record, but I need to see the evidence
20 from Cyprus that describes it as their business record.

21 MR. SATTERLEY: We -- we provide will that to
22 Your Honor.

23 MR. RIVAMONTE: Exhibit BB to my declaration,
24 Your Honor, is the deposition testimony of Henry
25 Mulryan, who was a -- who -- who worked for Cyprus and

1 has personal knowledge about how these call reports are
2 generated in the normal course of Cyprus's business.

3 MR. SATTERLEY: He was -- the president of
4 Cyprus was deposed. And also, if Your Honor will --
5 may recall, his/he's the signator of one of the other
6 letters that --

7 THE COURT: Are you going to read that to
8 the -- read that information to the jury because this
9 guy is unavailable?

10 MR. SATTERLEY: We have designated
11 Mr. Mulryan's deposition. If the Court requires it for
12 foundation purposes, we certainly would.

13 First, I think that its authentication as a
14 business record, as a preliminary matter, the Court
15 can -- can take that and determine itself that it's a
16 business record and otherwise admissible.

17 But if the Court requires us to read that
18 portion of Mr. Mr. Mulryan's testimony, we certainly
19 can do that, if -- if need be.

20 MR. MULARCZYK: I think Your Honor is still
21 going to run into the same problem, because it's not
22 going to be Mr. Mulryan saying, "This is what Colgate
23 told me."

24 THE COURT: No, no, no. But if he identifies
25 the document as being a business record for Cyprus,

1 authenticates that, that's an exception to the hearsay
2 rule.

3 MR. MULARCZYK: But the statement is being
4 made --

5 MR. GARY SHARP: Your Honor, the statement
6 contained within this record is something the
7 plaintiffs wish to -- to show to prove the truth of the
8 matter asserted. So it is the hearsay statement within
9 the document that is the objection.

10 I -- again, I'm not going to force them to read
11 a transcript for authentication. I believe these
12 are -- probably purport to be Cyprus documents. I have
13 no reason to believe that someone has done something to
14 them.

15 It's the hearsay statements within those Cyprus
16 documents that -- that we're placing our objection,
17 because they -- it's a salesperson, who is trying to
18 get something to his boss to convince him to allow
19 making calls on Colgate that, apparently, are taking
20 hours and -- and lunches.

21 THE COURT: Well --

22 MR. GARY SHARP: They are seeking to have those
23 statements made by Colgate employees, allegedly, on a
24 third-hand basis as something to prove the truth of the
25 matter asserted.

1 MR. RIVAMONTE: Your Honor, if you look at the
2 recipient, who are -- who are -- the persons who took
3 part in this three-hour lunch in April 19, 1976 --

4 THE COURT: I -- I -- I saw that.

5 MR. RIVAMONTE: Yeah, Mr. Simko is in there.
6 So Colgate employees were --

7 THE COURT: My ruling is going to be that if we
8 can see that these are Cyprus -- genuinely business
9 records, then I will admit them into evidence.

10 If they're not, the -- the other objection that
11 it's a hearsay document or a double hearsay document is
12 one that goes to something else. I mean, hearsay
13 doesn't apply if there is an exception to the hearsay
14 rule. Hearsay within hearsay, we can give them a
15 limiting instruction, if we need to.

16 But -- so that would mean that 3600, 3601, 3603
17 are all in. And 3604 as well.

18 (Whereupon, Plaintiff's Exhibit 3600 was
19 received into evidence.)

20 (Whereupon, Plaintiff's Exhibit 3601 was
21 received into evidence.)

22 (Whereupon, Plaintiff's Exhibit 3603 was
23 received into evidence.)

24 (Whereupon, Plaintiff's Exhibit 3604 was
25 received into evidence.)

1 MR. GARY SHARP: And, Your Honor, we'll --
2 we'll draft proposed limiting instruction for the
3 Court.

4 THE COURT: I -- I have one that sort of aims
5 in this direction, and we can talk about it. Let's
6 finish this first, though.

7 MR. GARY SHARP: Thank you, Your Honor.

8 THE COURT: I also wanted to do one other
9 thing, is that counsel need not request leave of Court
10 to approach the witness every single time.

11 If you want to make the record clear, just say,
12 "I'm going to show you this document, Mr. Witness," and
13 then just --

14 MR. GARY SHARP: Thank you, Your Honor.

15 MR. SATTERLEY: We appreciate it, Your Honor.

16 MS. CLANCY: And then don't do it in a menacing
17 fashion. And then don't approach in a menacing
18 fashion.

19 THE COURT: Well, now I'm going -- I'm not
20 worried about that in this case.

21 Okay. So 3600, in; 3601, in; 3603, in; 3604,
22 that's also going to be in; 3605 -- 3611, which is
23 Number 44 --

24 MR. RIVAMONTE: It's the one with Mr. Roach.

25 THE COURT: Pardon?

1 MR. RIVAMONTE: The one you mentioned earlier
2 this morning.

3 THE COURT: Oh, no, no, no. That's -- that's
4 not spelled like me. The other one --

5 MR. RIVAMONTE: Oh, the other one.

6 THE COURT: It's 3590 --

7 MR. RIVAMONTE: Oh, okay.

8 THE COURT: -- has printing in the upper
9 right-hand corner that looks, strangely, like mine with
10 the name F. Roesch, R-o-e-s-c-h, which is how you spell
11 my name. It's an unusual spelling. It's not real
12 common. But I'm not related.

13 Okay. Let's move on.

14 MR. SATTERLEY: Colgate did have a facility in
15 Berkeley, Your Honor.

16 THE COURT: Okay. So we have the -- this
17 McCrone document with a picture on it that's --

18 MR. GARY SHARP: Which tab are we at,
19 Your Honor? Which tab?

20 THE COURT: This is 44. It's a letter directed
21 to Ms. Grace Roach of the Colgate-Palmolive Company --

22 MR. SATTERLEY: I thought we agreed --

23 THE COURT: -- July 1983.

24 MR. SATTERLEY: I thought, Mr. Sharp --

25 MR. GARY SHARP: Yeah.

1 MR. SATTERLEY: -- you -- you agreed to this
2 one; right?

3 MR. GARY SHARP: Yes.

4 THE COURT: All right. So that one will be in
5 evidence.

6 And that -- that completes that.

7 MS. CLANCY: That completes all the Scala
8 exhibits, Your Honor.

9 THE COURT: All right.

10 THE REPORTER: What -- what was Number 44 that
11 you just admitted? Was that 36- --

12 THE COURT: 3611.

13 MR. SATTERLEY: A letter from McCrone to
14 Ms. Grace Roach.

15 THE REPORTER: Okay. Thanks.

16 MS. CLANCY: Oh, Your Honor, may I just -- to
17 help the -- to assist the court reporter and the
18 Clerk -- I gave Mr. Satterley the wrong exhibit number
19 today on something. I just need to read it into the
20 record. I told him one of the exhibits that was
21 admitted was 727, but the actual exhibit number is
22 3591.

23 THE COURT: Okay.

24 MR. SATTERLEY: There was no objection at the
25 time, so I just rocked and rolled.

1 THE COURT: Mr. Bir? Mr. Bir --

2 THE CLERK: Yes?

3 THE COURT: -- we are going to admit another
4 exhibit here.

5 MS. CLANCY: It was already admitted.

6 THE COURT: Oh, it was already admitted?

7 MS. CLANCY: I just read the --

8 THE COURT: So we need to delete one.

9 MS. CLANCY: When he said, "I'm now showing you
10 727," that's because I gave him the wrong sticky.

11 THE COURT: So -- all right. So both of those
12 are in evidence. They're just different documents?

13 MS. CLANCY: No. 727 is not evidence. It's
14 3591. And I had some sort of --

15 MR. SATTERLEY: It's the same document, though.

16 MS. CLANCY: It's the same, yeah.

17 MR. SATTERLEY: It's the J4-1 method; right?

18 MS. CLANCY: Yes.

19 It's the same document. I gave him the wrong
20 document number.

21 THE COURT: Okay.

22 MS. CLANCY: So I didn't want there to be
23 any -- I've made more confusion --

24 THE COURT: Well, now, I'm easily confused.

25 Okay. I have a -- a limited -- evidence

1 admitted for limited purpose instruction that -- I'll
2 just show it to you. And if you -- if you want to --

3 MR. SATTERLEY: Can we get a copy, by chance,
4 Your Honor, or --

5 THE COURT: All right. Is there anything else
6 we need to talk about before we let the reporter go
7 home?

8 MR. SATTERLEY: The only thing is, there was
9 some evidentiary rulings Your Honor made -- evidentiary
10 rulings Your Honor made, I believe, regarding some
11 additional J&J documents, and earlier, I had requested
12 that they be received into evidence.

13 When I did that, it was at a break, and I
14 didn't hear Your Honor respond, "Okay, those are
15 received into evidence," like you did yesterday.

16 This morning you issued a ruling. It
17 was the --

18 THE COURT: What numbers are you talking about?

19 MR. SATTERLEY: These are Exhibit 4687, 0790,
20 407 --

21 THE COURT: Wait.

22 MR. SATTERLEY: And I'm reading from
23 Your Honor's order.

24 THE COURT: 4687?

25 MR. SATTERLEY: 4687, yes, Your Honor.

1 THE COURT: That's in evidence.

2 MR. SATTERLEY: Yes. The -- so -- so I guess
3 the question is, I have a list here that Your Honor
4 signed yesterday --

5 THE COURT: Well, my Clerk is on the job.

6 MR. SATTERLEY: Okay.

7 THE COURT: If I signed that order, he put them
8 into evidence.

9 MR. SATTERLEY: Okay. That's all I wanted to
10 make sure.

11 THE COURT: And I'm looking at the list of
12 documents that the Clerk has as in evidence, and 4687
13 is there.

14 MR. SATTERLEY: Okay.

15 THE COURT: So I think that if we use that as
16 an exemplar, you are going to be fine.

17 MR. SATTERLEY: I was just making sure the
18 court reporter has it reflected on the transcript.

19 THE COURT: All right.

20 MR. SATTERLEY: Thank you, Your Honor.

21 MS. STEINMANN: Your Honor, what time would you
22 like us back tomorrow?

23 THE COURT: 9:00.

24 MR. SATTERLEY: And one last thing, because
25 Dr. Longo will be going in the morning, I'm going to

1 meet and confer with defense counsel. Dr. Horn, I may
2 have to move him to either Thursday or Monday. I'll
3 send an email to counsel to let -- let them know about
4 that.

5 THE COURT: All right. We're in recess.

6 (Whereupon, Plaintiff's Exhibit 4687 was
7 received into evidence.)

8 (Whereupon, Plaintiff's Exhibit 790 was
9 received into evidence.)

10 (Whereupon, Plaintiff's Exhibit 407 was
11 received into evidence.)

12 (Whereupon, Plaintiff's Exhibit 670 was
13 received into evidence.)

14 (Whereupon, Plaintiff's Exhibit 679 was
15 received into evidence.)

16 (Whereupon, Plaintiff's Exhibit 3014 was
17 received into evidence.)

18 (Whereupon, Plaintiff's Exhibit 3088 was
19 received into evidence.)

20 (Whereupon, Plaintiff's Exhibit 5917 was
21 received into evidence.)

22 (Whereupon, Plaintiff's Exhibit 3573 was marked
23 for identification.)

24 (Whereupon, Plaintiff's Exhibit 3574 was marked
25 for identification.)

1 (Whereupon, Plaintiff's Exhibit 3577 was marked
2 for identification.)

3 (Whereupon, Plaintiff's Exhibit 3578 was marked
4 for identification.)

5 (Whereupon, Plaintiff's Exhibit 3581 was marked
6 for identification.)

7 (Whereupon, Plaintiff's Exhibit 3594 was marked
8 for identification.)

9 (Whereupon, Plaintiff's Exhibit 3595 was marked
10 for identification.)

11 (Whereupon, Plaintiff's Exhibit 3599 was marked
12 for identification.)

13

14 (Whereupon, the proceedings
15 were concluded at 5:25 p.m.)

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1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF ALAMEDA)
4

5 I, EARLY K. LANGLEY, do hereby certify:

6 That foregoing proceedings were held in the
7 above-entitled action at the time and place therein
8 specified;

9 That said proceedings were taken before me at said
10 time and place, and was taken down in shorthand by me,
11 a Certified Shorthand Reporter of the State of
12 California, and was thereafter transcribed into
13 typewriting, and that the foregoing transcript
14 constitutes a full, true and correct report of said
15 proceedings that took place;

16 IN WITNESS WHEREOF, I have hereunder subscribed my
17 hand on April 30, 2019.

18

19

20

21

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23

24

25

EARLY K. LANGLEY, CSR No. 3537
State of California

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA
2 COUNTY OF ALAMEDA
3 BEFORE THE HONORABLE FRANK ROESCH
4 DEPARTMENT 17
5 ---000---
6 PATRICIA SCHMITZ,
7 Plaintiff,
8 vs. No. RG18923615
9 JOHNSON & JOHNSON, et
10 al.,
11 Defendants.
_____ /

12 REPORTER'S TRANSCRIPT OF PROCEEDINGS
13 (William Longo, Ph.D.)
14 Tuesday, April 30, 2019
15 Full Session
16

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18
19 Taken before EARLY K. LANGLEY
20 RMR, RSA, B.A.
CSR No. 3537

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<p>23</p> <p>1 --oOo--</p> <p>2 <u>P R O C E E D I N G S</u></p> <p>3 --oOo--</p> <p>4 Tuesday, April 30, 2019 - 8:44 a.m.</p> <p>5 (Morning Session)</p> <p>6 (Whereupon, the following proceedings were held</p> <p>7 outside the presence of the jury:)</p> <p>8 THE COURT: On the record.</p> <p>9 This is Schmitz v. Johnson & Johnson and</p> <p>10 Colgate.</p> <p>11 If I might impose on the lawyers to state your</p> <p>12 names for the record.</p> <p>13 MR. SATTERLEY: Good morning, Your Honor. Joe</p> <p>14 Satterley for the plaintiff.</p> <p>15 MS. CLANCY: Good morning, Your Honor. Denyse</p> <p>16 Clancy for the plaintiff.</p> <p>17 MR. CALFO: Good morning, Your Honor.</p> <p>18 Alexander Calfo for the Johnson & Johnson defendants.</p> <p>19 MR. BATTLE: Good morning, Your Honor. Mike</p> <p>20 Battle for the Johnson & Johnson defendants.</p> <p>21 MR. GARY SHARP: Good morning, Your Honor.</p> <p>22 Gary Sharp and Pete Mularczyk.</p> <p>23 MR. ANDREW SHARP: Good morning, Your Honor.</p> <p>24 Andrew Sharp for Colgate.</p> <p>25 THE COURT: All right. Counsel had an</p>	<p>25</p> <p>1 which was Exhibit 5 to the Scala deposition. We'll put</p> <p>2 Exhibit 6 to the side; we still need to resolve that</p> <p>3 one. Put Exhibit 7 to the side; we still need to</p> <p>4 resolve that one.</p> <p>5 So let me just move forward to the next one</p> <p>6 where there's no objection.</p> <p>7 That would be Exhibit 16, which is</p> <p>8 Exhibit 3583. There's no objection to 3583.</p> <p>9 MR. GARY SHARP: No objection, Your Honor.</p> <p>10 MR. SATTERLEY: There's no objection to 3584,</p> <p>11 which is Exhibit 17 to Scala's deposition.</p> <p>12 THE COURT: We'll get them all at once.</p> <p>13 MR. SATTERLEY: There's no objection to 3585,</p> <p>14 which is Exhibit 18.</p> <p>15 THE COURT: Just give me the numbers.</p> <p>16 MR. SATTERLEY: 3586.</p> <p>17 3587.</p> <p>18 MR. MULARCZYK: I'm sorry. Could we do it by</p> <p>19 the Scala deposition number. That's how we have it</p> <p>20 listed.</p> <p>21 THE COURT: Mr. Satterley, you're going to have</p> <p>22 to give me both numbers.</p> <p>23 MR. SATTERLEY: I'll go back to Exhibit 19,</p> <p>24 which was 3586.</p> <p>25 Exhibit 20 is 3587.</p>

26

1 Exhibit 24, which is 3591.
2 Exhibit 31, which is 3598.
3 Exhibit 35, which is 3602.
4 Exhibit 38, which is 3605.
5 Exhibit 39, which is 3606.
6 Exhibit 40, which is 3607.
7 Exhibit 41, which is 3608.
8 Exhibit 43, which is 3610.
9 And the one that I think counsel just indicated
10 they're going to withdraw their objection is 3611,
11 which is Scala Exhibit 44.
12 Exhibit 45 is 3612.
13 Exhibit 46 is 3613.
14 Exhibit 47 is 3614.
15 We seek the admission of each of those at
16 this -- at the time, Your Honor.
17 THE COURT: All right. As soon as Mr. Sharp
18 and Mr. Mularczyk are ready, we'll hear from them.
19 Do you stipulate all of those into evidence?
20 MR. GARY SHARP: Yes, Your Honor.
21 THE COURT: All right. Mr. Calfo.
22 MR. CALFO: Yes, Your Honor.
23 THE COURT: Have you any objection to any of
24 those exhibits?
25 MR. CALFO: No, Your Honor.

27

1 THE COURT: All right. So the record is
2 accurate, these are the exhibits that are being
3 admitted into evidence:
4 3571, 3572, 3583, 3584, 3585, 3586, 3587, 3591,
5 3598.
6 3602, 3605, 3606, 3607, 3608, 3610, 3611, 3612,
7 3613, and 3614.
8 Those are all in evidence.
9 (Whereupon, Plaintiff's Exhibit 3571 was
10 received into evidence.)
11 (Whereupon, Plaintiff's Exhibit 3572 was
12 received into evidence.)
13 (Whereupon, Plaintiff's Exhibit 3583 was
14 received into evidence.)
15 (Whereupon, Plaintiff's Exhibit 3584 was
16 received into evidence.)
17 (Whereupon, Plaintiff's Exhibit 3585 was
18 received into evidence.)
19 (Whereupon, Plaintiff's Exhibit 3586 was
20 received into evidence.)
21 (Whereupon, Plaintiff's Exhibit 3587 was
22 received into evidence.)
23 (Whereupon, Plaintiff's Exhibit 3591 was
24 received into evidence.)
25 (Whereupon, Plaintiff's Exhibit 3598 was

28

1 received into evidence.)
2 (Whereupon, Plaintiff's Exhibit 3602 was
3 received into evidence.)
4 (Whereupon, Plaintiff's Exhibit 3605 was
5 received into evidence.)
6 (Whereupon, Plaintiff's Exhibit 3606 was
7 received into evidence.)
8 (Whereupon, Plaintiff's Exhibit 3607 was
9 received into evidence.)
10 (Whereupon, Plaintiff's Exhibit 3608 was
11 received into evidence.)
12 (Whereupon, Plaintiff's Exhibit 3610 was
13 received into evidence.)
14 (Whereupon, Plaintiff's Exhibit 3611 was
15 received into evidence.)
16 (Whereupon, Plaintiff's Exhibit 3612 was
17 received into evidence.)
18 (Whereupon, Plaintiff's Exhibit 3613 was
19 received into evidence.)
20 (Whereupon, Plaintiff's Exhibit 3614 was
21 received into evidence.)
22 MR. SATTERLEY: With this witness we've met and
23 conferred; we have some agreements regarding
24 admissibility of exhibits with the -- prior to
25 Dr. Longo's testimony.

29

1 THE COURT: All right. Do you want to state
2 those?
3 MR. SATTERLEY: Yes, Your Honor. These are all
4 photographs that relates to the testing of the J&J, the
5 Colgate.
6 THE COURT: Just tell me the exhibit numbers.
7 MR. SATTERLEY: Yes, Your Honor.
8 1065, 1080, 1081, 1082, 1083, and 1084, 1091,
9 1092, 1093, 1096, 1097, 1098.
10 Should be a total of 12 exhibits. I have them
11 for Your Honor in binders organized. I provided them
12 to counsel both electronically and a hardcopy. It's my
13 understanding there's no objection with the exception
14 of J&J has objections to photographs of the J&J bottle
15 that accompanies the -- each -- they don't have
16 objection for demonstrative purposes, but they don't
17 want the actual photograph of the bottle to be received
18 into evidence.
19 THE COURT: Is the photograph part of the
20 exhibit?
21 MR. SATTERLEY: Yes. It is, Your Honor.
22 THE COURT: How can I accept part of an exhibit
23 into evidence?
24 MR. SATTERLEY: I wanted to resolve that issue
25 with Your Honor, show Your Honor the exhibit.

1 THE COURT: All right.

2 MR. SATTERLEY: And I've tendered to

3 Your Honor --

4 THE COURT: Which number --

5 MR. SATTERLEY: This is 1080, Exhibit 1080, if

6 you go behind Tab Number 1. Tabs 2 through 11 there's

7 no objections to. Tab 1. Tab 1 is -- and what

8 occurred here, Your Honor, is J&J produced these

9 photographs in response to discovery under -- behind

10 Tab 1.

11 And these were the actual bottles that

12 Dr. Longo, the samples came from. And so, for example,

13 to put in context, if we could go to the fourth

14 photograph on page 4 of 1080, you'll see that J&J has

15 marked the date of the product, and so this is

16 important evidence for the jury to consider in context

17 of the sample that's being analyzed, and many of these

18 bottles have the dates on them and J&J provided those

19 dates -- provided these bottles to us exactly in this

20 fashion.

21 So it puts context on the date of the sample in

22 question. And these are the historical.

23 So like I said, all the photographs behind

24 Tabs 2 through 11, there's no objection to. That's the

25 testing -- the photographs of the actual test.

1 THE COURT: So what you're telling me is that

2 there's more than one bottle that is pictured?

3 MR. SATTERLEY: That's --

4 THE COURT: And these are the bottles that the

5 samples that Longo tested actually came in.

6 MR. SATTERLEY: Came from.

7 THE COURT: Came from.

8 MR. SATTERLEY: Because J&J's labs made the

9 sample splits and then with the chain of custody said

10 this is the sample you're getting and --

11 THE COURT: I understand. I'm just asking

12 questions here. And the writing on the -- the typed

13 writing that's taped to one bottle, for example, is

14 something that was written by Johnson & Johnson and

15 taped on to the bottle by Johnson & Johnson.

16 MR. SATTERLEY: That's the way that it was

17 produced in the course of discovery, Your Honor.

18 THE COURT: So if you ask your witness, Longo,

19 do you recognize these and he's going to say that's

20 exactly how I got them from Mr. Satterley.

21 MR. SATTERLEY: The samples were not received

22 in the bottles themselves. The samples -- J&J's own

23 lab took the samples and gave us the sample numbers.

24 You can see it says "JPBP" -- it's got a number of 188

25 or 093, and the chain of custody document matches up so

1 the dates are matched up, and he can explain that

2 through the chain of custody process.

3 But this just gives the context to the dates.

4 Counsel advised me they have no objection to

5 demonstrative for these. At the very least, I'd like

6 to demonstrate some of these, but I think they're

7 actually -- should come into evidence so the jury can

8 evaluate the dates of the various samples as

9 represented by J&J.

10 THE COURT: All right.

11 Ms. Steinmann, you're standing there.

12 MS. STEINMANN: Your Honor.

13 THE COURT: I presume that you're going to tell

14 me what the objection is.

15 MS. STEINMANN: The objection is just that

16 these aren't evidence of anything in this case.

17 Dr. Longo is going to be able to tell the jury what the

18 dates were and there is no reason to put in 99 photos

19 of different Johnson & Johnson bottles. It's not

20 evidence of anything. Demonstrative-wise I agree --

21 THE COURT: That's not an evidentiary

22 objection. Maybe it's a -- maybe the argument is 352

23 cumulative. But the concept that they don't need to is

24 not --

25 MS. STEINMANN: Sorry, Your Honor. Formal

1 objection --

2 THE COURT: They have to -- they get to put on

3 their case.

4 MS. STEINMANN: Formal objection is 352. I was

5 just explaining the reasons for our objection, which is

6 I believe these are fair for a demonstrative, but I

7 don't think they have any relevance to go back to the

8 jury. And she didn't use those bottles, and we just

9 don't want the jury to get the misimpression that all

10 of these bottles came from Mrs. Koretoff --

11 Mrs. Schmitz, I'm sorry.

12 THE COURT: Okay. If that's the objection,

13 it's overruled.

14 MS. STEINMANN: Thank you, Your Honor.

15 THE COURT: So what number is that exhibit?

16 MR. SATTERLEY: That's 1080.

17 THE COURT: All right. The following

18 exhibits -- other than that one, do you stipulate that

19 all the rest of the list that was read by Mr. Satterley

20 may be admitted into evidence?

21 MS. STEINMANN: Your Honor, I believe I was

22 walking in, but if it's what he said to me --

23 THE COURT: I'll read it to you, if you'd like.

24 MS. STEINMANN: Okay.

25 Is this it?

34

1 MR. SATTERLEY: I provided hardcopies to -- to
2 all counsel. These are the J&J's and Colgate is right
3 there.
4 MS. STEINMANN: Just give me one second to get
5 through them.
6 THE COURT: Of course.
7 MS. STEINMANN: Yes, Your Honor. This appears
8 to be what was sent to us and we did stipulate to
9 these.
10 THE COURT: All right. Mr. Sharp, have you any
11 objection to any of these exhibits?
12 MR. GARY SHARP: No, Your Honor.
13 MR. MULARCZYK: Your Honor, I just have one
14 objection. I'm sorry. Are we talking about the
15 Johnson & Johnson ones or the ones pertaining to
16 Colgate?
17 THE COURT: Yes. We're talking about the 1065
18 through 1098 list that was read into the record by
19 Mr. Satterley.
20 MR. MULARCZYK: So the only objection that I
21 have -- I'm okay with all the photographs. The one
22 objection I have is a document here. It's a chain of
23 custody document. It's 1096. And my objection is that
24 this contains a list of samples that aren't at issue in
25 this case and that Dr. Longo is not relying on.

35

1 So.
2 MR. SATTERLEY: Are you talking about this list
3 right here?
4 MR. MULARCZYK: Correct.
5 THE COURT: What number?
6 MR. MULARCZYK: There's a whole host of samples
7 that are not subject to this case at all in this list.
8 This is 1096.
9 THE COURT: I understand, but in this binder
10 what tab is it?
11 MR. SATTERLEY: Your Honor, you don't have the
12 correct binder right there. 1096. If I could tender
13 it to the Court. It's in the second box.
14 This is the first I'm hearing of this
15 objection, but I can agree if they don't cross-examine
16 on -- that he didn't test these other 43 bottles -- or
17 41 bottles, I will agree to redact that and only put
18 the ones -- the bottles that he did test. What
19 occurred -- well -- and that's my offer is, as long as
20 they don't cross-examine on those other bottles that
21 were not tested, I have no problem redacting this
22 document and making it only the bottles that were
23 tested.
24 THE COURT: All right. So we'll redact the
25 bottles that weren't tested.

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1 MR. SATTERLEY: Yes.
2 THE COURT: That sounds like a perfectly good
3 way of approaching the problem.
4 MR. SATTERLEY: Yes, Your Honor.
5 MR. MULARCZYK: Thank you, Your Honor.
6 THE COURT: Okay. So, for the record, the
7 following exhibits are admitted into evidence:
8 1065, 1080, 1081, 1082, 1083, 1084, 1091, 1092,
9 1093, 1097, 1098.
10 (Whereupon, Plaintiff's Exhibit 1065 was
11 received into evidence.)
12 (Whereupon, Plaintiff's Exhibit 1080 was
13 received into evidence.)
14 (Whereupon, Plaintiff's Exhibit 1081 was
15 received into evidence.)
16 (Whereupon, Plaintiff's Exhibit 1082 was
17 received into evidence.)
18 (Whereupon, Plaintiff's Exhibit 1083 was
19 received into evidence.)
20 (Whereupon, Plaintiff's Exhibit 1084 was
21 received into evidence.)
22 (Whereupon, Plaintiff's Exhibit 1091 was
23 received into evidence.)
24 (Whereupon, Plaintiff's Exhibit 1092 was
25 received into evidence.)

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1 (Whereupon, Plaintiff's Exhibit 1093 was
2 received into evidence.)
3 (Whereupon, Plaintiff's Exhibit 1097 was
4 received into evidence.)
5 (Whereupon, Plaintiff's Exhibit 1098 was
6 received into evidence.)
7 (Whereupon, Plaintiff's Exhibit 1096 was marked
8 for identification and provisionally admitted
9 after redaction.)
10 THE COURT: 1096 is provisionally admitted, but
11 the actual document will be redacted after testimony of
12 the witness who will itemize the ones that he actually
13 tested.
14 That means that you can't show that one on the
15 screen.
16 MR. SATTERLEY: Yes, Your Honor. We have three
17 additional stipulations with regards to demonstrative
18 evidence. And this is Exhibits 1046, 1047, and 1099.
19 1046 is a NIST standard, and I don't believe
20 there's any objection --
21 For demonstrative purposes only; correct?
22 MR. CALFO: Correct.
23 THE COURT: All right. So 1046 won't be
24 admitted into evidence, but you may show it on the
25 screen.

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1 (Whereupon, Plaintiff's Exhibit 1046 was marked
2 for identification.)
3 MR. SATTERLEY: Yes, Your Honor.
4 MR. MULARCZYK: Well, we have an objection to
5 that one specifically for all purposes. I didn't have
6 an objection to the animation that he proposed, but I
7 did have an objection to that for all purposes. It
8 wasn't something that was disclosed in this case, it
9 wasn't something that was referenced as reliance
10 material in his deposition, and so for that reason it
11 shouldn't be permitted in this case.
12 THE COURT: All right. So it's a demonstrative
13 tool.
14 MR. SATTERLEY: Yes, just demonstrative,
15 Your Honor. We're not seeking its admission.
16 THE COURT: All right. What is it?
17 MR. SATTERLEY: It's just -- it's a tremolite.
18 The NIST -- NIST is the National Institute for
19 Standards and Technology, and this shows what tremolite
20 the standard is.
21 THE COURT: Is that the image that you're
22 showing me there that I can see from here?
23 MR. SATTERLEY: Pardon?
24 THE COURT: No, no. I can see it from here.
25 Oh, it's not just one page.

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1 MR. SATTERLEY: It is, I think, three pages and
2 it shows what under the microscope the standard of
3 tremolite is, and all Dr. Longo does is says -- gives
4 an opinion that he has -- that he's -- his lab took
5 these photographs.
6 THE COURT: All right. I'll allow it as a
7 demonstrative. I won't allow it into evidence.
8 MR. SATTERLEY: And the heavy liquid separation
9 animation is 1046 is what I showed in opening
10 statement. Counsel advised me they have no objection
11 to it for demonstrative purposes only the animation of
12 the heavy liquid separation, as 1047.
13 THE COURT: All right. That can be shown on
14 the monitor, but it won't be in evidence.
15 MR. SATTERLEY: Yes, Your Honor. And the final
16 is the 1990 advertisement in a magazine called *Asbestos*
17 *Issues*, June of 1990. And this is Exhibit 1099. And
18 it's --
19 No objection for demonstrative purposes?
20 MR. CALFO: No objection for demonstrative
21 purposes.
22 THE COURT: Mr. Mularczyk?
23 MR. SATTERLEY: The 1990 ad.
24 THE COURT: All right. Mr. Mularczyk is
25 shaking his head no.

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1 MR. MULARCZYK: No objection, Your Honor, I'm
2 sorry.
3 THE COURT: All right, so that one also can be
4 shown to the jury, but it's not in evidence.
5 (Whereupon, Plaintiff's Exhibit 1047 was marked
6 for identification.)
7 (Whereupon, Plaintiff's Exhibit 1099 was marked
8 for identification.)
9 MR. SATTERLEY: While I'm meeting and
10 conferring with Mr. Calfo, Ms. Clancy has a few issues
11 that she may want to raise.
12 MS. CLANCY: Ms. Steinmann.
13 MS. STEINMANN: I'm sorry, but, Your Honor, we
14 were sent a grouping of exhibits early this morning,
15 and they also just were nice enough to provide me a
16 copy, but I'm still going through them as we've been
17 talking, so I'm not prepared to address these yet.
18 We've just got them this morning, so.
19 MS. CLANCY: These were all documents to which
20 Johnson & Johnson responded to an RFA saying that they
21 kept them in the ordinary course of business, and so at
22 the time they were created, I didn't anticipate there
23 would be, well, actually an objection to them. So if
24 we could just take two minutes to allow Ms. Steinmann
25 to look at the documents.

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1 THE COURT: Are you going to be using them with
2 this witness?
3 MS. CLANCY: Yes, Your Honor.
4 THE COURT: All right. Well, let's take a
5 minute and take a look at it. We'll take a short
6 recess.
7 MS. CLANCY: Thank you, Your Honor.
8 MR. MULARCZYK: When this issue is resolved, I
9 don't know if the Court remembers, but we still had a
10 motion in limine on this witness, and -- with the full
11 expectation that this Court is not going to turn around
12 this witness and send him home, I just would ask for a
13 few minutes so we can address it and we just have a
14 ruling on it before we move forward.
15 THE COURT: All right.
16 While Ms. Steinmann is looking at all those
17 documents, we are going to Amotion in limine. It is
18 Motion in Limine -- Joint Motion in Limine Number --
19 I've forgotten the numbers -- like, 7 or 8, or
20 something. It's Number 1 --
21 MR. MULARCZYK: It's 3A.
22 THE COURT: Well -- oh, it's -- oh --
23 MR. MULARCZYK: It's -- it's Colgate's Motion
24 in Limine 3A.
25 THE COURT: Yes, there you go. It was also

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1 Whitaker, Clark & Daniels' motion.
2 And by the way, I -- I want to point out to you
3 that on Exhibit 23 to the Scala deposition, where it
4 says "F. Roesch, R-o-e-s-c-h, at the top in what
5 appears to be maybe even my handwriting, that's not my
6 handwriting. And I am no relation to Fred Roesch.
7 MR. GARY SHARP: It is spelled differently.
8 THE COURT: No, it's not.
9 MR. GARY SHARP: I thought it was R-o-a-c-h.
10 Exhibit 23, Your Honor?
11 THE COURT: Yes.
12 MR. SATTERLEY: As I was reading through the
13 document the other day, I was thinking, "I wonder if
14 he's related."
15 THE COURT: All right. I have this motion
16 actually as Motion in Limine Number 2 of
17 Colgate-Palmolive.
18 MR. MULARCZYK: Oh, okay. All right.
19 MS. CLANCY: Isn't that the one he already
20 ruled on, Number 2?
21 MR. MULARCZYK: We never argued this one.
22 MS. CLANCY: We argued one motion in limine for
23 you on Dr. Longo on -- on chain of custody.
24 MR. MULARCZYK: So there was one on samples,
25 and there was on Longo. Two separate motions.

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1 MS. CLANCY: Correct.
2 I think -- I think, Your Honor, where -- I'm a
3 little confused, because we argued one on the
4 authenticity of the samples, and then they filed
5 another motion also alleging authenticity of the
6 samples and -- and other of what -- Dr. Longo's
7 opinions. I just want to make sure I'm responding to
8 the correct one, because the Court has already ruled on
9 the one with regard to authenticity of the samples.
10 THE COURT: This is -- it's -- it's this motion
11 right here, this --
12 MS. CLANCY: What is -- what is the --
13 THE COURT: I would say that's nine inches of
14 Colgate --
15 MS. CLANCY: The 9-inch motion? Well,
16 unfortunately, that doesn't differentiate it from other
17 any of Colgate's other motions, so --
18 THE COURT: This is -- this is the biggest one.
19 MS. CLANCY: Oh, the biggest one. What's the
20 title of it?
21 THE COURT: Plaintiffs' -- it is Defendant
22 Colgate-Palmolive Company's Motion in Limine to Exclude
23 Testimony of Plaintiff's Expert Dr. William Longo
24 Regarding Unreliable Testing Performed on Undisclosed,
25 Unauthenticated Containers of Cashmere Bouquet.

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1 MS. CLANCY: I think that's the one that the
2 Court has already ruled on, but --
3 THE COURT: My note shows that it's passed.
4 MS. CLANCY: Okay. All right. Well --
5 THE COURT: You may be confusing it with the
6 Egilman motion.
7 MR. MULARCZYK: Your Honor, there was one about
8 the authenticity of the samples themselves.
9 THE COURT: That was --
10 MR. MULARCZYK: It was Joint -- it was Joint
11 Defense, I think, Motion in Limine Number 1, maybe, or
12 Colgate Number 1.
13 THE COURT: All right. Well, go ahead,
14 Mr. Mularczyk.
15 MR. MULARCZYK: All right. So since -- since
16 this motion is fresh in your mind, Your Honor --
17 THE COURT: I must confess that while I read
18 the motion, I didn't look at all the exhibits.
19 MR. MULARCZYK: And I don't blame you.
20 So this is -- this is a really focused motion.
21 Generally speaking, I don't have a concern with
22 Dr. Longo speaking about the testing that he personally
23 did, but where it becomes problematic is when he
24 attempts to extrapolate from his own handful -- subset
25 of testing that he's done to try to say whether or not

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1 what the plaintiff used was contaminated and at what
2 levels specifically.
3 There is an opinion that he has specifically
4 within his -- within his declaration and that he
5 offered in his deposition, which is, basically, anybody
6 including Ms. Schmitz, who used Cashmere Bouquet at any
7 time would have been exposed to asbestos and at
8 significant levels or substantial levels.
9 And so, again, I've got no problem with him
10 coming in here and talking about the samples he's
11 tested. It's well within -- well within his realm.
12 But there is nothing that he has done
13 scientifically, whether it's some sort of analysis or
14 calculation, whether it be mathematical or statistical
15 or anything at all, that allows him to make the jump
16 from the small subset of samples that he has tested to
17 the -- to the entire product line or even to the
18 products that Ms. Schmitz used. There's simply nothing
19 there. Nothing at all.
20 And I think it's inappropriate to allow him to
21 do that under *Sargon*. I don't think he's demonstrated
22 that. And so if we're going to keep him to -- if we
23 are going to keep him in his lane and have him talk
24 about his samples that he has looked at personally, no
25 problem. But as soon as he makes that jump to what

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1 Ms. Schmitz used and whether that's appropriate, I
2 think it's not, and I don't think it's supported.
3 THE COURT: All right. Does Johnson &
4 Johnson --
5 MR. CALFO: We join.
6 THE COURT: You concur with that?
7 MR. CALFO: Yes, Your Honor.
8 THE COURT: All right.
9 Ms. Clancy.
10 MS. CLANCY: Okay. Yes, Your Honor. So within
11 the nine inches of exhibits that Colgate attached, I'm
12 assuming that they attached Dr. Longo's report in this
13 case, where they stated that there were no scientific
14 calculations, no data, no math whatsoever to support
15 his opinions, and that's absolutely belied by his
16 report.
17 He's testified in his deposition -- and he
18 provided voluminous testing -- that not only has he
19 examined the actual samples of Cashmere Bouquet and
20 Johnson & Johnson --
21 THE COURT: Well, they're -- they're not saying
22 that. They're saying that he's incapable of opining
23 that because he found asbestos in the samples that he
24 looked at of the Colgate-Palmolive product, that --
25 that other bottles may have had asbestos in them, too.

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1 MS. CLANCY: Yeah, sure. So he found in the
2 Colgate bottles, 100 percent contained asbestos.
3 THE COURT: 100 percent of the samples, not --
4 MS. CLANCY: Correct.
5 THE COURT: -- 100 percent of the bottles.
6 MS. CLANCY: And he also found -- went through
7 the Colgate historical documents, where Colgate found
8 asbestos in their samples.
9 He's also reviewed the mechanism of testing
10 that Colgate used in order to analyze whether or not it
11 had asbestos, which, as the Court heard yesterday and
12 as we heard from Scala, is the XRD method, which is
13 incapable of being sensitive to asbestos below a
14 certain level. 2 percent to 1 percent is the
15 scientific evidence.
16 And so, therefore, under *Lyons v. Colgate*, the
17 Court of Appeals expressly held that where you have an
18 expert who analyze d the sample at issue, who has
19 looked at the historical document, who has looked at
20 the testing samples, the testing that was used by the
21 corporation, to see that it was wholly deficient to
22 find whether there was asbestos there in the first
23 instance, that it is absolutely permissible for that
24 expert to say whether or not when the plaintiff
25 breathed -- that the plaintiff would have had

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1 substantial exposure to asbestos by use of the product.
2 And that *Colgate v. Lyons* decision was
3 expressly found, especially in a situation where the
4 plaintiff had a lifetime use or it was for decades of
5 use of a product, that for the expert to say that it
6 would have been a substantial exposure upon use of the
7 product was permissible testimony.
8 Anything with respect to, "Well, you can't say,
9 because you didn't test her actual bottle that she
10 used," or "You can't say that literally every bottle
11 had asbestos in it because you couldn't test every
12 single bottle," that goes, the Court held -- went to
13 the weight and not the admissibility of that opinion.
14 The -- Dr. Longo in his report set forth the
15 careful calculations, where he analyzed each of
16 Ms. Schmitz' personal use exposures from each of the
17 products, calculating the number of grams in the
18 products, the amount of ounces used in her lifetime,
19 and the -- the resultant exposure that would have
20 ensued as a result of her use of the products.
21 This is square on with what the Court of
22 Appeals has held is admissible based on, actually,
23 Defendant Colgate's same objections in that case.
24 THE COURT: Mr. Mularczyk.
25 MR. MULARCZYK: So I guess I'll have to live

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1 with the Lyons decision forever, but that was a summary
2 judgment case, okay, has no applicability to the issue
3 that we're raising here.
4 Let's make sure we understand what his
5 expertise is. He's a material scientist. He's an
6 analyst. He tests the products that are before him, or
7 his lab tests the products that they're looking at.
8 He's -- he's not an individual that has anything in his
9 background that allows him to make this statistical
10 leap about what Ms. Schmitz may have used and how often
11 and so forth.
12 He, himself, testified at his deposition that
13 the reason he gets from his subset of 58 samples to
14 what Ms. Schmitz used was because he took the number of
15 positives, divided it by the total number of samples he
16 tested, and says, "Well, that's the percentage. I'm
17 going to be a little bit conservative, because there's
18 some nondetects" -- and he tested some samples where he
19 found nothing, by the way -- and then he says, "I'm
20 going to take that percentage and apply it to the
21 universe of products."
22 That's -- that's not expertise, Your Honor. I
23 could do that for anything.
24 THE COURT: Well, you can -- it goes to the
25 weight, though. It goes not to admissibility.

50

1 The motion is denied.
2 All right. Are we ready to proceed?
3 MS. CLANCY: I just was going to find out
4 which --
5 THE COURT: Still on the record.
6 Ms. Steinmann is going to give us the word as
7 soon as she's ready.
8 Ms. Steinmann, how much more time do you need?
9 MS. STEINMANN: I -- I think I'm ready.
10 THE COURT: All right. I don't want to press
11 you. If you need a few more minutes, that would be
12 fine.
13 MS. STEINMANN: I'm done.
14 THE COURT: All right.
15 MS. CLANCY: Can I just look at which ones
16 you've --
17 MS. STEINMANN: Yes.
18 MS. CLANCY: May I meet and confer with her for
19 one minute, Your Honor?
20 THE COURT: Yes.
21 MS. CLANCY: Thank you.
22 (Counsel conferring at counsel table out of the
23 hearing of the reporter.)
24 MS. CLANCY: Your Honor, we have a stack of
25 agreed. If I could read into the record and then we

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1 have a very small stack of disagreed.
2 THE COURT: All right.
3 MS. CLANCY: Agreed exhibits which plaintiffs
4 offer into evidence are Plaintiff's 640, 158, 155, 171,
5 174, 430, 660, 713, 752, and 172.
6 THE COURT: Ms. Steinmann, do you stipulate
7 those documents into evidence?
8 MS. STEINMANN: Yes, Your Honor.
9 THE COURT: Mr. Sharp? Mr. Mularczyk?
10 MR. MULARCZYK: Just subject to the same
11 objection regarding the applicability -- well, hearsay
12 as to Colgate and then the instruction that we
13 requested.
14 THE COURT: All right. Well, the hearsay as to
15 Colgate, which one? I mean, you know.
16 MR. MULARCZYK: My understanding is these are
17 all Johnson & Johnson documents, so all of them as
18 against Colgate.
19 THE COURT: Oh, all right. Well, it's just the
20 issue about that the jury can't take evidence of
21 malfeasance by Johnson & Johnson and attribute it to
22 Colgate?
23 MR. MULARCZYK: Correct.
24 THE COURT: Okay. You will get an instruction
25 on that. You'll just have to continue working it out.

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1 MR. CALFO: Your Honor, we're both getting an
2 instruction; right?
3 THE COURT: Oh, yeah, yeah, yeah. It goes both
4 ways. It actually will be one -- it's all in one
5 instruction more likely than not.
6 All right. All of those exhibits are in
7 evidence. I'll read them for the record:
8 640, 158, 155, 171, 174, 430, 660, 713, 752,
9 and 172.
10 (Whereupon, Plaintiff's Exhibit 640 was
11 received into evidence.)
12 (Whereupon, Plaintiff's Exhibit 158 was
13 received into evidence.)
14 (Whereupon, Plaintiff's Exhibit 155 was
15 received into evidence.)
16 (Whereupon, Plaintiff's Exhibit 171 was
17 received into evidence.)
18 (Whereupon, Plaintiff's Exhibit 174 was
19 received into evidence.)
20 (Whereupon, Plaintiff's Exhibit 430 was
21 received into evidence.)
22 (Whereupon, Plaintiff's Exhibit 660 was
23 received into evidence.)
24 (Whereupon, Plaintiff's Exhibit 713 was
25 received into evidence.)

53

1 (Whereupon, Plaintiff's Exhibit 752 was
2 received into evidence.)
3 (Whereupon, Plaintiff's Exhibit 172 was
4 received into evidence.)
5 What documents are you offering that you do not
6 have agreement on?
7 MS. CLANCY: Sure. Should I -- there's just a
8 few, so should I take them one at a time -- and I want
9 to give an overarching change so there's one thing on
10 the table. For each of these, we're offering Johnson &
11 Johnson has responded to request for admission, in this
12 case stating that they -- the true and correct copy of
13 these -- these are true and correct copies and that
14 they were maintained in the ordinary course of business
15 of Johnson & Johnson.
16 THE COURT: So it's an admission that they're
17 business records?
18 MR. SATTERLEY: That's correct.
19 MS. CLANCY: So the -- then we'll get -- they
20 have objections on top of that.
21 So the first one is Document 724.
22 MR. SATTERLEY: I can address 724, Your Honor.
23 Their objection, I understand, is that this document
24 relates to industrial talc instead of cosmetic.
25 THE COURT: What is it?

1 MR. SATTERLEY: It's a McCrone letter to them
2 talking about the presence of amphiboles and asbestos,
3 fibers of asbestos in talc, in Vermont -- in the
4 Vermont mines where they were making baby powder with
5 this talc.

6 And they say this relates to industrial talc,
7 not cosmetic talc. But the testimony of Dr. Hopkins,
8 who the jury will hear, Your Honor has already ruled,
9 he says, and the other documents show, HC, the word
10 "HC" stands for Hammondsville cosmetic, and "HC" are --
11 is on the sample number on here quite a bit.
12 Your Honor has already overruled the general motion in
13 limine with regards to industrial talc or any reference
14 to industrial talc.

15 This, I think, falls squarely within that.
16 But, more importantly, it's going to be for the jury to
17 assess whether or not it's cosmetic talc like we claim
18 and like Dr. Hopkins admits through the documents that
19 HC stands for Hammondsville cosmetic or whether it's
20 industrial talc which that's their argument.

21 THE COURT: All right.

22 MS. STEINMANN: Your Honor, with respect to
23 that document, yes, we do dispute that HC, and
24 Dr. Hopkins also disputes it, that it is cosmetic talc.
25 He says it can be designated for industrial talc

1 including a specific document that says roofing
2 materials.

3 So we believe that that particular document
4 under 352 and relevance is not relevant to this case
5 and is also misleading and also requires us to have a
6 little minitrial of what HC actually means and what it
7 doesn't mean.

8 THE COURT: All right. I'll admit the document
9 into evidence. The objection is overruled.

10 Next one?

11 MS. CLANCY: That was 724.

12 THE COURT: 724 will be in evidence.

13 (Whereupon, Plaintiff's Exhibit 724 was
14 received into evidence.)

15 MS. CLANCY: The next one is 719.

16 MR. SATTERLEY: 719 is a letter from McCrone
17 once again to Windsor Minerals and it's signed by
18 Thomas Kremer and James Millette, and it's related to
19 1986. It's identification of chrysotile asbestos in
20 talc. We believe this is relevant to demonstrate that
21 chrysotile asbestos was actually found in the talc
22 samples. And there's been a lot of discussion about
23 McCrone and Dr. Millette, and there will be further
24 discussion about Thomas Kremer. And so we believe this
25 is relevant and important for the jury to understand

1 the identification of chrysotile as found in these
2 samples.

3 MS. STEINMANN: Your Honor, our response to
4 this is -- and I believe there's no dispute; there may
5 be, but -- this is specifically dealing with a mine in
6 California that cosmetic talc was never ever mined out
7 of, not for J&J or for any other company.

8 THE COURT: I think this was the Windsor mines?

9 MR. SATTERLEY: Windsor Minerals is not
10 California. Windsor Minerals is Vermont. It's Windsor
11 Minerals.

12 MS. STEINMANN: These testing results, as
13 Dr. Hopkins explains, are from a California western
14 mine.

15 THE COURT: Did Windsor mines have mines
16 outside of Vermont?

17 MS. STEINMANN: Johnson & Johnson only got
18 their talc from Vermont. I can't speak for Windsor
19 mines.

20 THE COURT: Okay. Well, you got to persuade me
21 that Windsor doesn't refer to the mines called Windsor
22 mines in Vermont before I can even really seriously
23 consider your objection.

24 MS. STEINMANN: Nowhere in here does it say
25 Windsor mines. It says "WMI," which is a designation

1 as Hopkins explains, which stands for this western mine
2 in California.

3 MR. SATTERLEY: Well, Hopkins, Your Honor, has
4 no basis whatsoever to explain away the document. The
5 document says Windsor Minerals. There's no Windsor
6 Mineral California talc mines that I've ever heard of.
7 So if that's their argument, that's an argument they
8 can make to the jury that that's not relating to this,
9 but there's certainly no documents to support that
10 argument.

11 THE COURT: All right. It seems that the
12 parties have different visions of what it actually
13 stands for. We'll let the jury decide it. 719 will be
14 in evidence.

15 (Whereupon, Plaintiff's Exhibit 719 was
16 received into evidence.)

17 MR. SATTERLEY: The next document is 726,
18 Your Honor. This is 2004 testing of Johnson & Johnson
19 Baby Powder by Forensic Analytical.

20 This was received by Johnson & Johnson at the
21 time. Forensic Analytical in Hayward, California
22 tested off-the-shelf baby powder, found asbestos in it,
23 anthophyllite asbestos. It was immediately -- this
24 report was transferred.

25 THE COURT: What's the objection?

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1 MS. STEINMANN: Your Honor, this was testing
2 done by a new station. It was not done by the request
3 or at the request of Johnson & Johnson, and we believe
4 it has hearsay and is irrelevant.

5 THE COURT: Well, it's not a business record?

6 MS. STEINMANN: It is -- it was in our files.
7 It was sent to us.

8 MR. SATTERLEY: Your Honor, at the very least,
9 this goes to notice. We're going to hear who Mark
10 Floyd is today.

11 THE COURT: It only goes to notice. 726 will
12 be in evidence.

13 (Whereupon, Plaintiff's Exhibit 726 was
14 received into evidence.)

15 MR. SATTERLEY: Your Honor, Exhibit 163 is a
16 1971 document regarding their meeting with Dr. Langer
17 concerning analytical analysis of talc, and this shows
18 that -- this gives them knowledge that with regard to
19 fibrous minerals in 1971 were identified. It goes to
20 the fibrous content. It goes to asbestos, their
21 knowledge of asbestos in the product. In this 1971
22 document in their files it says Johnson's product he
23 estimated 5 percent, and the other 25 percent of the
24 particles to be fibrotic, some of which could be
25 asbestos.

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1 I believe their objection is that it relates to
2 ovarian tissue, but at no point in this document do
3 they talk about ovarian cancer. They just talk about
4 the findings of talc and asbestos in ovarian tissue.

5 MS. CLANCY: Uterine tissue.

6 MR. SATTERLEY: Uterine tissue.

7 THE COURT: Ms. Steinmann.

8 MS. STEINMANN: Your Honor, a couple of things.
9 The document itself actually says "uterine tissue" on
10 the very first page. And this is, again, dealing with
11 the Tenovus study, which was solely directed at
12 studying uterine tissue for the development of ovarian
13 cancer and whether it was or was not caused by talcum
14 powder. That was the subject of an MIL, and we believe
15 that this document is irrelevant and misleading under
16 352.

17 THE COURT: Can I see the document?

18 MR. SATTERLEY: Yes, Your Honor. While I'm
19 handing the document to the Court, while Your Honor did
20 say ovarian cancer should not be discussed, this
21 document never talks about ovarian cancer.

22 THE COURT: Just let me read it. 163 will be
23 in evidence.

24 (Whereupon, Plaintiff's Exhibit 163 was
25 received into evidence.)

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1 MR. SATTERLEY: The final -- the final
2 document --

3 MS. STEINMANN: Your Honor, if I could, if it
4 is coming into evidence, could we just ask -- ask that
5 the word "uterus" be redacted.

6 THE COURT: Oh, I don't think that that's so
7 prejudicial.

8 MR. SATTERLEY: And the final document,
9 Your Honor, relates to documents already been displayed
10 to the jury in the cross-examination of Alice Blount.
11 This is a 1998 letter from Alice Blount to the attorney
12 for Johnson & Johnson. It was authenticated by
13 Dr. Blount, and --

14 THE COURT: What number is it?

15 MR. SATTERLEY: This is Exhibit 160, and this
16 is April 23, 1998, where she identifies the --

17 THE COURT: I remember.

18 MR. SATTERLEY: -- sample.

19 THE COURT: I remember the testimony.
20 What's the objection to that?

21 MS. STEINMANN: Your Honor, foundation and
22 hearsay.

23 THE COURT: Oh, she looked at the letter and
24 said, I sent this to their lawyer. That will be
25 admitted into evidence. That's Number 160.

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1 (Whereupon, Plaintiff's Exhibit 160 was
2 received into evidence.)

3 MS. STEINMANN: Your Honor, I also just want to
4 make sure, I believe that that had been sent with the
5 Blount records, so I want to make sure that there's not
6 duplicate copies being submitted. I didn't have a
7 chance to cross-reference --

8 MR. SATTERLEY: We won't put two copies of the
9 same things in evidence. We still have to address the
10 Blount documents later.

11 With that, Your Honor, we're prepared for the
12 jury to come in.

13 THE COURT: All right. Is there anything you
14 would like to raise, Mr. Calfo?

15 MR. CALFO: Nothing, Your Honor.

16 THE COURT: Nobody else is standing up. Let's
17 bring the jury in.

18 (Whereupon, the jury having entered the
19 courtroom, the following proceedings were held:)

20 THE COURT: Good morning, ladies and gentlemen.

21 THE JURY: Good morning.

22 THE COURT: Sorry to keep you waiting so long.
23 The record should reflect that all the jurors are in
24 their appropriate seats, counsel are present, and we're
25 ready to proceed.

1 We are not going back to the video. You're
2 going to see a witness this morning.
3 Would you please call your next witness,
4 Mr. Satterley.
5 MR. SATTERLEY: Yes. Good morning, Your Honor.
6 Good morning, ladies and gentlemen.
7 Dr. William Longo.
8 WILLIAM LONGO, Ph.D. (for the Plaintiff)
9 sworn as a witness,
10 testified as follows:
11 THE CLERK: Thank you, sir. Please take a
12 seat.
13 Could you please state your full name and spell
14 it for the record.
15 THE WITNESS: William Edward Longo, L-o-n-g-o.
16 THE COURT: Mr. Satterley, you may inquire on
17 direct examination.
18 MR. SATTERLEY: Thank you.
19 DIRECT EXAMINATION BY MR. SATTERLEY:
20 Q. Good morning, Dr. Longo.
21 A. Good morning.
22 Q. Have we requested you to come talk with the
23 folks here in Alameda County regarding your testing of
24 various talc products for the presence of asbestos?
25 A. Yes, sir, you did.

1 Q. And have we -- have you brought with you
2 photographic evidence of the testing and testing
3 results of what you found?
4 A. Yes, I did.
5 Q. Have I also asked you to analyze the case of
6 Patricia Schmitz with regards to her exposures, the
7 types of exposures she would have, to asbestos from
8 cosmetic talc products?
9 A. Yes. That's correct.
10 Q. Before we get to your specific opinions in this
11 case, let's talk a little bit about you and yourself.
12 Tell us, where did you go to college, college
13 forward as far as your education.
14 A. I went to the University of Florida. I
15 received a bachelor's of science in microbiology. I
16 went on to graduate school in material science and
17 engineering. I received a master's of science in
18 material science and engineering, and finished up in
19 1983 with a Ph.D. in material science and engineering.
20 All at the University of Florida.
21 Q. So when I call you "doctor," you're not a
22 medical doctor?
23 A. No, sir, I'm not.
24 Q. Tell us about material science. What is that?
25 A. It's an engineering field that literally is the

1 study of materials, and you can break these materials
2 down to approximately five groups.
3 Plastics or polymers, ceramics or minerals like
4 asbestos, metals, or metallurgy. And then composites
5 where you may have a polymer that has a metal content
6 of it where they mix two different things.
7 And then an area I spent a lot of time in, in
8 graduate school is biomaterials, things that are
9 implanted into the body like an artificial knee or a
10 hip replacement or an interocular lens if you have
11 cataract surgery.
12 And as a material scientist, we are taught and
13 learn all the properties of these different materials:
14 strength, weaknesses, ability to withstand corrosion or
15 not, and what are the right materials to use for any
16 particular type of engineering project. For example --
17 and I use this example a lot. If you're building a new
18 bridge, the new Bay Bridge that went up, a material
19 scientist would have been involved in that. And he
20 would be the go-between the civil engineer and the
21 mechanical engineer and the engineer who designed that
22 bridge.
23 What is the best concrete? What are the new
24 types of metal alloys that could be used that are
25 stronger, cheaper, better corrosion resistance. So a

1 material scientist would have been involved in most of
2 those aspects.
3 All your major semiconductor advances over the
4 years has been due to material scientists. I don't
5 know about now, but the CEO of Intel was a material
6 scientist at one point in the past.
7 So we understand where the products and
8 materials should be used, what kind of temperature --
9 strengths, temperature, resistance, et cetera. And
10 also as a material scientist, we -- they develop new
11 materials. Again, the semiconductor advances, the
12 ceramics on the -- that were developed for the space
13 shuttle, the -- even as simple as the changeover, if
14 your result is me, from the metal soda can to the
15 aluminum soda can. That was a material scientist who
16 came up with that particular aluminum/copper alloy,
17 mixture of two metals, to be able to make that into a
18 one-step process.
19 The last thing material that scientists do a
20 lot about is almost forensic engineering: What went
21 wrong? Is there a contaminant here? Why did this
22 break? What's in these ingredients that shouldn't be
23 in these ingredients? Say, a manufacturer is making
24 injection molding of these polyethylene plastic cups
25 and all of a sudden in the field they're not holding up

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1 and they're leaking.
2 The material scientist could probably go in and
3 figure out where in that engineering molding process,
4 is it the right materials, is it the right polymer.
5 And that's what I do at my lab a lot, is the forensic
6 engineering side of things.
7 Q. So let me talk about your lab. You currently
8 have a lab of how many employees?
9 A. We have a lab in Suwanee, Georgia, and
10 currently I think we're up to about 46 employees.
11 Q. And what are the type of professionals work
12 with you in your lab, what type of scientists?
13 A. I have other material scientists like myself.
14 We have physicists. We have inorganic chemists;
15 organic chemists; microbiologists; industrial
16 hygienists; geologists; mineralogists; mechanical
17 engineering; physicists -- I think I may have said
18 that. I think that covers it. Oh, and electron
19 microscopist specialist; polarized light microscopist
20 specialist; and, of course, the support staff, the
21 admin people that really run the company.
22 Q. And with regards to asbestos, how long have
23 you -- have you been involved in the analysis for the
24 presence of asbestos?
25 A. Yes, sir, I have.

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1 Q. For how long?
2 A. A little bit over 30 years.
3 Q. And with regards to asbestos issues, have you
4 made presentations or publications involving asbestos
5 or asbestos exposure?
6 A. I have.
7 Q. Have you tested many different products for the
8 presence of asbestos over the course of your career?
9 A. Yes, sir. Early years myself and also our lab.
10 Q. And approximately how many products or
11 specimens have you examined, you and your laboratory
12 examined, to determine whether asbestos is present or
13 not?
14 A. A large number of different types of products,
15 but just pure numbers of samples, our laboratory is
16 approaching close to 400,000 individual analysis of
17 samples, different samples for asbestos.
18 Q. And some of the testing and testing results
19 have you published in the peer-reviewed literature?
20 A. We have.
21 Q. And have you made presentations regarding your
22 findings of asbestos in some of the samples?
23 A. Yes, sir, we have.
24 Q. And with regards to your professional
25 organizations, what are some of the associations,

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1 organizations you belong to?
2 A. The American Industrial Hygiene Association,
3 the Materials Research Society, the Microscopist
4 Society, the American -- I've said that already.
5 American Industrial Hygiene, the American Society of
6 Testing Materials, the Ceramics Society, Materials and
7 Methods Group. There's a number of them. Adjunct
8 member of the American Conference of Governmental
9 Industrial Hygienists. I'm not an American
10 Industrial -- a Governmental Industrial Hygienist, but
11 you can be an adjunct on to that. And also I am a
12 board certified forensic engineer.
13 Q. Now, with regards to industrial hygiene, you
14 said you're not a member of -- you're not a member of
15 the American Conference of Government Industrial
16 Hygienists?
17 A. No. I'm not a full member. You have to have
18 worked for the government to be an -- as an industrial
19 hygienist, but you can be an adjunct member so you can
20 get the information.
21 Q. Have you reviewed and studied the scientific
22 literature on industrial hygiene about asbestos over
23 the course of your career?
24 A. Yes, I have.
25 Q. And in developing your expertise as a forensic

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1 engineer and material scientist, have you studied
2 exposures to asbestos that occur -- that individuals
3 have occurred historically?
4 A. I have.
5 Q. And have you reviewed those scientific
6 literature in that regard?
7 A. Yes, sir, I have.
8 Q. Do you, Dr. Longo, have specialized knowledge,
9 skill, and experience regarding exposures to asbestos
10 that folks have had based upon your review of the
11 scientific literature?
12 A. Yes, sir.
13 Q. Now, have you -- well, let me ask you about
14 your laboratory. Is your laboratory certified by any
15 organization?
16 A. It is.
17 Q. And what organization has certified your
18 laboratory?
19 A. We're certified by the American -- the American
20 Industrial Hygiene Association for analyzing asbestos
21 air samples. As well as asbestos bulk samples. We're
22 certified by the National Voluntary Laboratory
23 Accreditation Program for the analysis of asbestos by
24 transmission electron microscopy as well as bulk
25 samples by polarized light microscopy.

1 We're an International Standards Organization
2 certified for quality control, QC, as well as some
3 specialized testing, including water analysis for
4 asbestos. And we're also certified by 0 -- by ISO to
5 certify other laboratories that they follow a
6 particular type of analysis or protocol. And we're --
7 also we have -- we're registered laboratory for the --
8 for the FDA. So that we can analyze all types of
9 pharmaceutical-type materials from Schedule 2 on down.

10 We are certified by the DEA to handle those
11 types of products that come into the laboratory.
12 Again, Schedule 2 on down.

13 I guess that covers it, other than individual
14 certifications from groups that come in so that they
15 feel comfortable that when we do work or analysis for
16 them.

17 Q. What type of organizations have you consulted
18 with over the course of your career with regards to
19 testing materials including asbestos?

20 A. The FAA. We have consulted for the General
21 Services Administration, the Environmental Protection
22 Agency. NATO in Germany, when the Berlin Wall came
23 down, we were asked to analyze to see if that wall had
24 asbestos in it.

25 We have -- we have consulted for the Department

1 of Defense; for the U.S. Treasury; for National
2 Institutes of Health; for the CDC, Center for Disease
3 Control; and a number of companies outside this kind of
4 environment where we do problem-solving for them as
5 well as just regular analysis.

6 Q. Now, you're consulting at my request, me and
7 Ms. Clancy's request, in this case.

8 Have you done this in the past where you've
9 testified in cases involving injury and litigation?

10 A. Yes, I have.

11 Q. And have you testified at the request of
12 plaintiffs as well as the request of defendants in
13 litigation?

14 A. I have.

15 Q. I want to ask you about the ASTM D22. What is
16 that?

17 A. The American Society of Testing Materials is a
18 nonprofit organization, where most anybody can join,
19 and it is the largest group out there that develops
20 standards or testing for almost anything. There's
21 40- -- almost 40,000 members now.

22 And the D22 committee, is what I'm a member of
23 produces methods -- testing methods which, essentially,
24 is just a recipe, go from A to Z, so that labs can
25 standardize particular tests for analysis of different

1 types of matrices -- water, dust, et cetera -- for
2 asbestos.

3 Q. And how long have you been a part of the D22
4 committee or subcommittee?

5 A. Since approximately 1989 or so.

6 Q. And did you have any role in leading that
7 committee in the past or being part of leadership of
8 that committee?

9 A. Not leadership in the committee, but I was
10 tasked to being the shepherd or the person to push
11 through and write the test method for analyzing dust
12 for asbestos, building dust. The -- and I spent six
13 years doing that.

14 Q. Now, with regards to the tools that you use as
15 a material scientist for the identification of
16 asbestos, the jury has already heard last week from Lee
17 Poye about the transmission electron microscope. You
18 utilize that tool?

19 A. We do.

20 Q. How many TEMs do you have?

21 A. Currently, we have four.

22 Q. And how long have you had specialized
23 knowledge, skill, and experience in utilizing the
24 transmission electron microscope?

25 A. Over 30 years.

1 Q. The jury has heard about the scanning electron
2 microscope. Do you have a scanning electron
3 microscope?

4 A. We do.

5 Q. And how long have you utilized the scanning
6 electron microscope in your laboratory?

7 A. Over 30 years.

8 Q. The jury has heard about polarized light
9 microscopes. Do you have polarized light microscopes
10 in your lab?

11 A. We do.

12 Q. How many?

13 A. I think around 10.

14 Q. And how long has your laboratory utilized
15 polarized light microscopes historically?

16 A. Over 30 years.

17 Q. Will you -- do you have specialized knowledge
18 and experience in explaining what is seen under these
19 microscopes and what's identified and how they're
20 characterized? Will you be able to do that -- do that
21 today?

22 A. Yes, sir, I believe so.

23 Q. With -- specifically with regard to industrial
24 hygiene, you mentioned that you're a member of the
25 American Industrial Hygiene Association.

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1 How much literature have you looked at with
2 regard to asbestos in terms of exposures over the
3 course of your career?
4 **A. I think the number of published papers I've**
5 **reviewed has to be in the hundreds.**
6 **Q.** And with regards to your analysis of exposures,
7 do you review and consider historical company
8 documents?
9 **A. Yes, sir, I do.**
10 **Q.** And specifically in this case, have you
11 reviewed and looked at some of the Johnson & Johnson
12 historical documents regarding asbestos issues?
13 **A. Yes, I have.**
14 **Q.** And have you specifically looked at some of the
15 Colgate documents regarding asbestos issues?
16 **A. Yes, sir.**
17 **Q.** And in some of these historical documents --
18 and we'll talk about them a little bit later -- are
19 there technical-type terms mentioned in some of them
20 that you can help explain some of these terms?
21 **A. Yes, sir, I believe so.**
22 **Q.** The jury's probably heard of some of them, but
23 we -- we may go through some -- some more of those.
24 I asked you about your organizations, and I
25 just want to make sure -- I don't know -- the National

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1 Asbestos Council, were you a member of that
2 organization?
3 **A. Yes, sir, I am.**
4 **Q.** The Environmental Information Association, are
5 you a member of that organization?
6 **A. Yes, sir, I am.**
7 **Q.** The Electron --
8 **A. The National Asbestos Council, that morphed**
9 **into the Environmental Information Association. So**
10 **that's really one group.**
11 **Q.** Okay. I see.
12 And then the Electron Microscopy Society
13 association, are you member of that organization?
14 **A. Yes, sir. Yes, sir.**
15 **Q.** The Microbeam Analysis Society, are you a
16 member of that organization?
17 **A. That, too.**
18 **Q.** Are you a member -- have you been a member of
19 the New York Academy of Science?
20 **A. I have been a member in the past.**
21 **Q.** Have you been a member of the National
22 Institute of Building Sciences?
23 **A. Yes, sir. I still am.**
24 **Q.** Have you been a member of the Society for
25 Ultrastructural Pathology?

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1 **A. Yes, sir, I have been.**
2 **Q.** And in the past, have some of the publications
3 that you've published and been the co-author been on
4 asbestos issues with pathologists?
5 **A. Yes.**
6 **Q.** Okay. Does your laboratory -- in addition to
7 looking at products, has your laboratory looked at
8 tissue, human tissue, for asbestos, the presence of
9 asbestos?
10 **A. We have.**
11 **Q.** The American College of Forensic Examiners, are
12 you a member of that organization?
13 **A. Yes, sir. That's actually the one I'm board**
14 **certified in and now have been made -- been elected to**
15 **be a diplomat in that organization.**
16 **Q.** And have you -- specifically with regard to
17 talc and exposures from talc, have you studied the
18 scientific literature from an exposure perspective to
19 form the basis of your opinions here today?
20 **A. Yes.**
21 **MR. SATTERLEY:** Your Honor, at this time, I
22 would offer Dr. Longo as an expert in material science,
23 asbestos testing, and exposure.
24 **THE COURT:** Mr. Calfo, do you wish to inquire
25 of this witness on his qualifications?

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1 **MR. CALFO:** Your Honor, we'll reserve our
2 questioning for later.
3 **THE COURT:** Mr. Mularczyk?
4 **MR. MULARCZYK:** No questioning at this time,
5 Your Honor.
6 **THE COURT:** All right.
7 Ladies and gentlemen, this witness will be
8 certified as an expert in material science, forensic
9 engineering, testing for asbestos, and exposure to
10 asbestos.
11 During this trial, you will hear testimony from
12 expert witnesses. The law allows an expert to state
13 opinions about matters in his or her field of expertise
14 even if he or she does not witness any of the events
15 involved in the trial.
16 You do not have to accept an expert's opinion.
17 As with any other witness it is up to you to decide
18 whether you believe the expert's testimony and choose
19 to use it as a basis for your decision. You may
20 believe all, part, or none of an expert's testimony.
21 In deciding whether to believe an expert's
22 testimony, you should consider the expert's training
23 and experience, the facts that the expert relied on,
24 the reasons for the expert's opinion.
25 The law allows expert witnesses to be asked

1 questions that are based on assumed facts. These are
2 sometimes called hypothetical questions.
3 In determining the weight to give to the
4 expert's opinion that is based on assumed facts, you
5 should consider whether the assumed facts are true.
6 If expert witnesses disagree with one another,
7 you should weigh each opinion against the others. You
8 should examine the reasons given for each opinion and
9 the facts or other matters that each witness relied
10 upon. You may also compare the experts'
11 qualifications.
12 With that in mind, Mr. Satterley, you may
13 inquire on direct examination.
14 MR. SATTERLEY: Thank you, Your Honor.
15 BY MR. SATTERLEY:
16 Q. Dr. Longo, I'll jump to the -- your opinions
17 first. Then we are going to backtrack and go through a
18 lot of the bases for your opinions.
19 Do you have an opinion, Dr. Longo, based upon
20 everything you've looked at -- internal company
21 documents, historical documents, the scientific
22 literature, all the testing that you've done -- whether
23 or not Johnson & Johnson Baby Powder historically has
24 included asbestos as a part of it?
25 A. I do have an opinion.

1 Q. And what is your opinion?
2 A. That it does.
3 Q. Do you have an opinion, Dr. Longo, based upon
4 historical review of company documents, your review of
5 the scientific literature, your own -- your
6 laboratory's own testing of Cashmere Bouquet product,
7 whether the Cashmere Bouquet historically has included
8 asbestos as a part of it?
9 MR. MULARCZYK: Objection. Foundation.
10 THE COURT: It's overruled.
11 THE WITNESS: Yes, I do have an opinion.
12 BY MR. SATTERLEY:
13 Q. And what is your opinion?
14 A. That that product does.
15 Q. And with regards to this case, did you evaluate
16 Ms. Schmitz' exposure to those products, both Johnson &
17 Johnson Baby Powder and Cashmere Bouquet?
18 A. Yes, I did.
19 Q. And have you reviewed testimony of her and her
20 sisters that was given under oath with the attorneys
21 for these companies?
22 A. Yes.
23 Q. And have you developed an opinion or formed an
24 opinion with regards to her exposures to asbestos from
25 these products?

1 A. Yes, I did.
2 Q. And what is your opinion?
3 A. That she was exposed to asbestos from the use
4 of these two manufacturers' products.
5 Q. And did you issue a signed report with your
6 calculations regarding the exposures she had?
7 A. I did.
8 Q. And in your opinion, based upon her many years
9 of use of these products and being around the products
10 when her family members were using them, do you have an
11 opinion whether those exposures was a substantial
12 exposure to asbestos from their products?
13 MR. MULARCZYK: Objection. Foundation.
14 THE COURT: Sustained.
15 BY MR. SATTERLEY:
16 Q. We'll go through the math in a little bit.
17 With regards to Johnson & Johnson -- let's
18 start with Johnson & Johnson -- have you reviewed
19 historical documents with regards to their testing,
20 testing done by laboratories at their request?
21 A. Yes.
22 Q. And with regards to Colgate-Palmolive, have you
23 reviewed testing by laboratories of the Cashmere
24 Bouquet product for the presence of asbestos?
25 A. Yes.

1 Q. And based upon your review of the historical
2 documents, do you have an opinion whether it was
3 documented back in the 19- -- with regards to Johnson &
4 Johnson first, back in the 1960s and the 1970s,
5 asbestos being present?
6 MR. CALFO: Objection, Your Honor. No
7 foundation for this witness.
8 MR. MULARCZYK: And hearsay, Your Honor.
9 THE COURT: Overruled on both.
10 THE WITNESS: Yes, I do have an opinion.
11 BY MR. SATTERLEY:
12 Q. And with -- and with --
13 A. That it is -- that it does.
14 Q. What is your opinion?
15 A. The opinion is that it does.
16 Q. Okay. And we'll go through some of the
17 documents here in a little bit.
18 With regards to Colgate-Palmolive, once again,
19 did you look at the historical documents in the 1970s,
20 '80s, and '90s regarding the Cashmere Bouquet product?
21 A. Yes, sir.
22 Q. And based upon your review of the historical
23 documents of the Cashmere Bouquet product, was it
24 documented in the '70s, '80s, '90s and forth -- so
25 forth, the presence of asbestos?

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1 MR. MULARCZYK: Same objections, Your Honor.
2 THE COURT: It's overruled.
3 THE WITNESS: Yes, it was.
4 BY MR. SATTERLEY:
5 Q. First of all, I want to -- I want to ask you a
6 question -- a few questions. Counsel --
7 Oh, there it is. That's what I was looking for
8 right there.
9 Counsel for Johnson & Johnson told the folks on
10 the jury that you personally have made \$30 million
11 working for plaintiffs' lawyers.
12 Is that true?
13 MR. CALFO: Objection, Your Honor. Misstates
14 opening statement. I said the company did.
15 MR. SATTERLEY: I disagree.
16 THE COURT: It's overruled. The jury will --
17 THE WITNESS: No, I have not made \$30 million
18 working for plaintiffs' attorneys personally.
19 BY MR. SATTERLEY:
20 Q. You and your company, the company you work for,
21 MAS, that's --
22 You're the president of the company; correct?
23 A. Yes, I am.
24 Q. Okay. Is it -- it is true, though, over the
25 course of 30-some-odd years you've charged for your

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1 time in litigation to both plaintiffs -- plaintiffs and
2 defendants in these forensic situations?
3 A. Yes, I have.
4 Q. And would it be fair to say, over 30-some-odd
5 years, you have charged -- your company has charged
6 both for your time and all the other folks working --
7 involved in forensic issues, litigation issues, well
8 over \$30 million?
9 A. My time; other individuals that have testified;
10 all the testing we did over the years, especially in
11 the property damage litigation, where we did forensic
12 engineering to identify the products, that would be
13 fair. That's what our company has billed over
14 30 years.
15 Q. With regards to advertising, a Johnson &
16 Johnson lawyer told the folks on the jury that you
17 started advertising for plaintiffs' lawyers -- to get
18 plaintiffs' cases 30-some-odd years ago.
19 Is that true?
20 A. That is not true.
21 Q. We've marked for identification purposes
22 Exhibit 1099. And if I could --
23 It's okay.
24 Let's see. Is the projector on?
25 May I approach, Your Honor?

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1 THE COURT: You may.
2 BY MR. SATTERLEY:
3 Q. I'm handing you, Dr. Longo, Exhibit 1095. I
4 shared it with counsel previously, another copy,
5 courtesy copy --
6 THE COURT: Is it 1095 or 1099?
7 MR. SATTERLEY: 1099, Your Honor.
8 -- another courtesy copy.
9 BY MR. SATTERLEY:
10 Q. Is this a journal called *Asbestos Issues*, dated
11 June 1990?
12 A. It is.
13 Q. And by this point in time --
14 If I can figure out how to... there we go.
15 By this point in time, 1990, were you
16 already -- did you already have specialized skill on
17 utilizing the transmission electron microscope?
18 A. Yes, sir.
19 Q. And did you already consider yourself to be an
20 expert on utilizing the transmission electron
21 microscope?
22 A. Yes. I had spent a lot of time, especially in
23 graduate school, as well as in my career at that point,
24 dealing with interpreting, analyzing samples on the
25 transmission electron microscope.

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1 Q. It says in this 1990, "Asbestos management
2 strategies for new era building owners."
3 Did your company place an ad in this -- in this
4 journal?
5 A. We did.
6 Q. And did this journal relate to building issues?
7 A. Yes, sir.
8 Q. All right. And is this the advertisement that
9 was placed in this journal in 1990?
10 A. It was.
11 Q. Does this in any way relate to you trying to
12 get business from mesothelioma victims so you can
13 testify in a courtroom like this?
14 A. No, not at all.
15 Q. If somebody were to say this ad right here
16 proves that you were trying to be an expert for people
17 suffering from asbestos disease, would that be
18 accurate?
19 A. No, sir.
20 Q. The person in the ad with -- this is you over
21 here on the right; correct?
22 A. Yes. I've hardly aged at all.
23 Q. Okay.
24 A. Yes, that's me.
25 Q. Okay. And this fellow on the left, who's that?

1 A. That's Mr. George Yamate.
2 Q. Who is George Yamate?
3 A. George Yamate is the author of the TEM
4 protocol -- and you may hear something about it --
5 typically called the Level 1, Level 2, Level 3
6 analysis. There was a draft method issued in the early
7 1980s or so for the EPA, and it's still a widely used
8 protocol, especially Level 2, in our industry. And
9 George Yamate was the author of that.
10 Q. I want to show you this part right here.
11 It's -- it's hard to read. I've got it blown up here.
12 I showed it to counsel.
13 First of all, it says on here, "final clearance
14 lab," "the final clearance lab." What does "the final
15 clearance" mean?
16 A. Final clearance in this industry is that when
17 there is an abatement of removing asbestos, especially
18 in schools, there's a requirement that they do a final
19 air clearance, which means that once the contractor
20 says, "Yes, we're all done. We got all the asbestos
21 out. Everything is clean. There's no asbestos dust
22 left in this area that we did this in containment" --
23 final air clearance would involve going in and taking
24 air samples while the consultant uses a leaf blower at
25 a hundred miles an hour to disturb any dust that may be

1 laying anywhere to see if there's asbestos present
2 before you let the kids back in the school.
3 That's final air clearance, and it's sort of a
4 term now of art that everybody uses. "Yes, we've got
5 some final air clearance samples coming," we know
6 exactly what that is. And that's what we were
7 advertising for.
8 Q. This paragraph here, it says, "Professional
9 asbestos consultants and contractors know that when the
10 job demands the best final air clearance testing by
11 TEM, you go to the people whose rigorous in-house
12 quality control measures produce TEM results and
13 professional support that stands up to the toughest
14 tests you may face."
15 That was included; correct?
16 A. Yes, sir.
17 Q. And you -- had you and Mr. Yamate in a
18 courtroom somewhere in Georgia; right?
19 A. Yes, it was. It was in rural Georgia, and we
20 took this ad in the courtroom to say that "If you use
21 our laboratory and somebody challenges your final air
22 clearance, saying, 'Oh, it's not really clean,' or 'You
23 should have did this,' we would come in and defend our
24 data. We would" -- "If it goes to court, we would be
25 working for you, saying, 'No, this is what the' --

1 'This is the analysis we did, and it's correct.'"
2 That's what that ad was about.
3 Q. And the folks that would be hiring you for this
4 would be building owners or contractors, people doing
5 asbestos abatement?
6 A. Yes, sir.
7 Q. Okay. This had absolutely nothing to do with
8 talc issues?
9 A. No.
10 Q. Had nothing to do with mesothelioma victims?
11 A. No.
12 Q. Had nothing to do with plaintiff lawyers or
13 anything like that?
14 A. No, sir.
15 Q. Now I want to switch gears and talk about
16 testing and testing methods. Tell us about the
17 strengths of utilizing transmission electron microscope
18 for the identification of asbestos.
19 A. Its strengths are that it's the most sensitive
20 method out there in that it can detect single asbestos
21 fibers and fully characterize them in that if you see a
22 single small fiber, you can get the chemistry of it,
23 utilizing EDXA, or the energy dispersive x-ray. So you
24 can do microchemistry.
25 You can get crystalline structure information

1 by doing the diffraction patterns. I know Mr. Poye
2 probably went through all that when he was here,
3 diffraction patterns.
4 And it allows you to take photographs of these
5 micro- -- these -- these microscopic fibers.
6 And so if you have something there, you can
7 fully characterize it. So it still is the most
8 sensitive method for this type of analysis.
9 Q. I want to show you what's already in evidence,
10 Exhibit 326. This is 1974, January 3rd.
11 MR. SATTERLEY: May I approach, Your Honor?
12 THE COURT: You may.
13 BY MR. SATTERLEY:
14 Q. January 3, 1974, on Johnson & Johnson
15 letterhead. And you've seen this in the past and
16 considered this; correct?
17 A. I have.
18 Q. And this is from A.J. Goudie to Dr. Gaughran
19 and Dr. Shelley, "Purchase of a transmission electron
20 microscope plus attachments."
21 Do you see that?
22 A. I do.
23 Q. And Dr. Goudie says, "Over the past three
24 years, there seems to have been general agreement that
25 transmission electron microscope is the only absolute

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1 proof with electron diffraction for the identification
2 of asbestos in talc."
3 Do you agree with the statement that was said
4 in 1974?
5 A. Yes and no. I would agree, in 1974, that was
6 the absolute best instrument to use, but only for the
7 positive identification.
8 The "no" part is, it's not -- if you don't see
9 asbestos by TEM using that at the time, it doesn't mean
10 that there's no asbestos present. It just means you
11 didn't detect it.
12 So, yes, it is the most -- at that time, it was
13 the best method to use for absolute identification.
14 THE COURT: Mr. Satterley, if you're moving on
15 to something else, would you please identify the
16 document that you have on the screen by the exhibit
17 number.
18 MR. SATTERLEY: I apologize, Your Honor. I
19 thought I did. 326.
20 THE COURT: All right.
21 MR. SATTERLEY: I apologize.
22 The next document that's already into evidence,
23 Exhibit 238. And may I approach again, Your Honor?
24 THE COURT: You may.
25 BY MR. SATTERLEY:

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1 Q. This is March 1974, a confidential Johnson &
2 Johnson memorandum.
3 MR. SATTERLEY: I provided a copy to counsel.
4 Another copy.
5 BY MR. SATTERLEY:
6 Q. And flip over to the second page, page 2.
7 To put this into context, on the first page,
8 does it say it's -- it's to the Windsor Minerals,
9 Windsor, Vermont, from R.C. Reynolds, Dartmouth
10 College?
11 Do you see that on the first page?
12 A. Yes, sir, I do.
13 Q. And this -- "Subject: Analysis of talc
14 products and ores for asbestiform amphiboles"?
15 A. Yes, sir.
16 Q. And on the second page, it says, where I've
17 highlighted here on Exhibit 238, "For the reasons
18 described above, a concentration technique is
19 mandatory" --
20 MR. SATTERLEY: I apologize, Your Honor.
21 Mrs. Schmitz.
22 -- "for the reasons described above, a
23 concentration technique is mandatory because it brings
24 the amphiboles into a reasonable concentration range
25 for optical or other methods of analysis.

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1 "Such a method has been developed, and it" --
2 "it is described in this report."
3 Have you considered this document in your
4 analysis of what's known as the concentration method?
5 A. I have.
6 Q. And based upon this document and many other
7 documents, was the concentration method a method that
8 was discussed within Johnson & Johnson way back in the
9 1970s?
10 A. Yes, sir, it was. Early '70s.
11 Q. And I would like to show you another document
12 that you -- I believe you considered.
13 This is Exhibit 329. It's already into
14 evidence. This is dated June 3, 1973, on Johnson &
15 Johnson letterhead.
16 And do you see it's signed off by
17 Dr. D.R. Petterson?
18 A. I can't see who it's signed off by on --
19 Q. The name at the bottom -- oh, I'm sorry.
20 MR. SATTERLEY: May I approach, Your Honor, and
21 hand the witness -- I apologize.
22 THE WITNESS: I believe you're correct, but I
23 just wanted to check.
24 BY MR. SATTERLEY:
25 Q. Thanks for helping me out there. All right.

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1 You see now, Doctor, that -- D.R. Petterson's
2 name at the bottom?
3 A. I do.
4 Q. And it's carbon-copied to W. Ashton?
5 A. Yes, sir.
6 Q. And have you considered many documents from
7 Bill Ashton, or William Ashton, historically with
8 regard to Johnson & Johnson?
9 A. Yes, sir.
10 Q. And it says in -- it says in the third
11 paragraph -- it says, "Note the use of the
12 concentration technique is the drafted specification
13 for the analysis of asbestos."
14 "Also, I have discussed with Shelley that the
15 samples to be sent by Dr. Rolle will be on 20 recent
16 samples of powder in which we found no
17 tremolite/actinolite by optical technique."
18 I want to stop right there and ask you to
19 explain the optical technique and why you would analyze
20 using a concentration technique if there are no
21 tremolite or actinolite identified.
22 A. The optical technique is using polarized light
23 microscopy, and that is a very good technique as long
24 as the amount of asbestos in there is high enough for
25 it to detect.

1 Every analytical method has an analytical
2 sensitivity/detection limit, where the analyte -- and
3 we all call it analytes -- the asbestos is at a
4 concentration still in there but lower than the optical
5 microscope can detect. You say it's nondetect.

6 So in order to increase the ability to detect
7 it or get a better analytical sensitivity, you go to
8 the concentration method, which is -- literally, you're
9 looking for needles in a haystack. That might take you
10 a long time. You may miss them.

11 If you get rid of the hay and just look for the
12 needles, because the needles are all now concentrated,
13 you can come back and say, "Yes, there are all these
14 needles in the haystack. I just couldn't see them
15 before because there was so much hay, I had to weed
16 through."

17 And that's what the concentration does.

18 Q. Is the concentration method a preparation
19 method that's done before you put it onto the filter
20 before it goes into the microscope itself?

21 A. Yes, sir. That's a good point.

22 These techniques -- polarized light microscopy,
23 XRD, x-ray diffraction, and especially transmission
24 electron microscopy -- it's all about the sample
25 preparation and how good a job you do and how you

1 concentrate it, how you put it together before it goes
2 into what we call tools.

3 Because the analytical transmission electron
4 microscope is just going to give you the same
5 information that it would give you no matter what.
6 It's all about sample preparation.

7 So you prepare the sample in a way that gives
8 the best opportunity to see if you can detect the
9 asbestos at the lower -- the best analytical
10 sensitivity you can. That's all done before you get to
11 the electron microscope.

12 All these techniques, it's all about sample
13 preparation.

14 Q. And with regards to the presence of platy talc,
15 if you prepare a sample where it has lots of platy talc
16 on it, will that -- does that potentially obstruct the
17 analyst's ability to see the asbestos materials?

18 A. Yes. You're covering it up, especially in the
19 transmission electron microscope, or the TEM --
20 everybody calls it TEM.

21 If I have an asbestos fiber here and I have a
22 platy talc on top of it -- we're imaging by using an
23 electron beam, which goes real good for resolution, but
24 it only has so much strength. So it can't go through
25 stuff that builds up.

1 So if here's my asbestos fiber and I have a
2 platy talc here, I go, "Okay. Well, I can see it."
3 But if I start getting more and more platy talc on here
4 because it's so concentrated with it, pretty soon, it's
5 like that. You can't find it, no matter how much you
6 look for it, TEM, if you have too many talc particles
7 in there.

8 Good analogy is that I have a big bowl of
9 spaghetti, and there's a couple of meatballs in there,
10 and I'm just looking at the bowl, and I can't see them.
11 But if I take it and spread it out or I get rid of the
12 spaghetti, the meatballs stand right out.

13 And -- and that's with both polarized light
14 microscope and especially with TEM. If you have too
15 much talc in there, you can't see the asbestos fibers.

16 So what they used to do -- or still -- people
17 still do it -- is, they dilute the sample to spread all
18 that talc out so that you can find the asbestos fibers.
19 But if you dilute the talc particles, you're diluting
20 the asbestos fibers, too. So now I'm spreading it out
21 and making it harder and harder to find something if
22 it's present.

23 If I use the concentration method, I get the
24 talc out of there, and I can concentrate the asbestos
25 down, better opportunity to see if it's really

1 positive, detectable or not.

2 Q. This 1974 Johnson & Johnson document says,
3 "Shelley reports that Pooley" -- you know who
4 Dr. Pooley is?

5 A. Yes, sir, I do.

6 Q. -- "that Pooley has found actinolite in our
7 Vermont talc by his concentration technique. Italian
8 talc by the same technique appears to be free of
9 amphiboles. I have sent the report referred to
10 I.W. Sloan on to Roger Miller for their study."

11 Do you see that?

12 A. Yes, sir.

13 Q. Is this one example in 1973 of the use of the
14 concentration method by analysts finding asbestos that
15 they otherwise would not find by optical microscope?

16 A. That is correct.

17 Q. One other exhibit and then I want to talk -- I
18 want to show the animation on the heavy liquid
19 separation.

20 This is Exhibit 330.

21 MR. SATTERLEY: May I approach, Your Honor?

22 THE COURT: Yes, you may.

23 MR. SATTERLEY: It's already into evidence.

24 BY MR. SATTERLEY:

25 Q. This is November 26, 1974, on Johnson & Johnson

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1 letterhead. And it, Dr. Longo, is signed by a --
2 signature on the second page, John P. Schelz --
3 S-c-h-e-l-z.
4 Do you see that?
5 **A. Yes, sir, I do.**
6 **Q.** Is this a document you considered in
7 formulating your opinions in analyzing this case?
8 **A. Yes.**
9 **Q.** And it says, "It's a review of experimental
10 techniques for the concentration of asbestos minerals
11 in talc, Project Number 0503-00."
12 Do you see that?
13 **A. I do.**
14 **Q.** It says, "Our preliminary investigation of
15 experimental technique for the concentration of
16 asbestos minerals in talc has been in two areas:" And
17 then they have a whole section on -- at the top.
18 Do you see that?
19 **A. I do.**
20 **Q.** And Dr. Fred Pooley is referenced there.
21 **A. Yes, sir, he is.**
22 **Q.** And I want to focus on the second.
23 It says, "The concentration of
24 actinolite/tremolite" -- by the way, actinolite and
25 tremolite, is that a form of asbestos?

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1 **A. It is.**
2 **Q.** And we'll show photographs.
3 Have you seen actinolite/tremolite asbestos
4 under your microscopes?
5 **A. We have.**
6 **Q.** And have you taken photographs of them and
7 demonstrated for the presence of talc?
8 **A. Yes, sir.**
9 **Q.** It says, "The concentration of actinolite,
10 tremolite, and chrysotile from talc by individual heavy
11 liquid separation technique developed by Dr. Robert
12 Reynolds, Dartmouth College. Dr. Reynolds of the
13 Department of Earth Science has been requested by
14 Mr. V. Zeitz" --
15 You know Vernon Zeitz? You know that name?
16 **A. I've have see it on documents.**
17 **Q.** -- "of Windsor Materials (sic) to work on the
18 actinolite concentration technique. This method
19 utilizes the difference in densities between actinolite
20 and other amphiboles and talc to effect separation in a
21 heavy liquid medium."
22 Do you see that?
23 **A. I do.**
24 **Q.** Is that what's sometimes referred to as the
25 heavy liquid separation?

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1 **A. It is.**
2 **Q.** So when we talk concentration and we talk heavy
3 liquid separation, are we basically talking about the
4 same process?
5 **A. It is the same process, but you can concentrate**
6 **by other methods for other things, like if you're --**
7 **it's calcium carbonate and -- you can dissolve out the**
8 **calcium carbonate with a slight acid solution. That's**
9 **not what we're dealing with here. They're all**
10 **concentration methods, but this one uses liquid that is**
11 **heavier density than, say, water, to cause things to**
12 **sink versus causing things to float.**
13 Amphibole asbestos will sink, the talc will
14 float because of their different densities.
15 **Q.** It says, "Following Dr. Reynold's procedure, we
16 have been able to detect tremolite by optical
17 microscopy dispersion staining in the separated
18 fraction from a sample containing initially as little
19 as 0.01 percent by weight tremolite in Vermont talc."
20 And I want -- and I want to ask you: The
21 separation process, can be utilized by both the TEM and
22 by a regular microscope?
23 **A. Yes, sir.**
24 **Q.** Okay. And can -- can the separation method
25 be -- once it's separated and prepped out, can it be

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1 looked under what's called a "PLM," a polarized light
2 microscope?
3 **A. Yes, it can.**
4 **Q.** Now I want to switch gears and talk about the
5 animation. And this is Exhibit 1047 for demonstrative
6 purposes only.
7 Have you in the past, Dr. Longo -- well, did
8 you actually assist in the preparation of this
9 animation?
10 **A. I did.**
11 **Q.** And you told me and my graphics people how
12 to -- how the heavy liquid separation process occurred?
13 **A. Yes.**
14 **Q.** And let me --
15 Does this heavy liquid separation animation
16 truly -- accurately demonstrate the process of heavy
17 liquid separation?
18 **A. It does.**
19 **Q.** And as we see this animation perceived through,
20 if you can talk us through what -- what's happening?
21 **A. Here's the centrifuge tube. You have talc in**
22 **the bottom. And then you're putting a heavy liquid**
23 **density material in there so that you can separate the**
24 **talc from any potential amphiboles that might be**
25 **present. So you shake it up and get the talc**

1 distributed through there and put it in a centrifuge
2 where you're spinning it anywhere from 7,000 to
3 9,000 rpm. After you're done, you'll have a talc plug
4 at the top, since it floats, and most of your
5 amphibole -- potential amphibole asbestos minerals will
6 come to the bottom of the centrifuge tube.

7 Once that happens, you can remove the tip. We
8 use a technique by flash freezing the centrifuge tube
9 in liquid nitrogen and using sort of a guillotine-type
10 apparatus to just cut the tip off, and then put that in
11 solution, filter it, and then analyze it.

12 We normally use 30 milligrams of talc when we
13 do this. And we can put the entire amount of the
14 collected material on a TEM filter.

15 If you use 30 milligrams of talc and filtered
16 that on to a TEM filter without doing this, the sample
17 would be black. It would be so thick the electron
18 beams can't go through the sample. You would never be
19 able to do that.

20 So this increases the sensitivity almost
21 10,000 times for the finding of potential amphibole
22 asbestos.

23 Q. Have you utilized, you and your laboratory,
24 utilized the heavy liquid separation technique with
25 regards to samples of Johnson & Johnson, historical

1 samples provided by Johnson & Johnson, for preparation
2 in this case?

3 A. Yes, I have.

4 Q. Have you, you and your laboratory, analyzed
5 Cashmere Bouquet utilizing the heavy liquid separation
6 for the identification of asbestos?

7 A. Yes, we have.

8 Q. And have you issued reports and photographs and
9 documented asbestos after utilizing the heavy liquid
10 separation?

11 A. Yes.

12 Q. Have you and your laboratory utilizing heavy
13 liquid separation preparation and utilize that under a
14 transmission electron microscope?

15 A. Yes, we have.

16 Q. Have you utilized the heavy liquid separation
17 for -- have you utilized the heavy liquid separation
18 specifically regarding Cashmere Bouquet under a
19 polarized light microscope?

20 A. Yes.

21 Q. And will -- a little bit later will you be able
22 to demonstrate the photographs and what's represented
23 in the photographs?

24 A. Yes.

25 Q. Using the heavy liquid separation, the

1 concentration method, did you and your laboratory find
2 asbestos in the Colgate Cashmere Bouquet products that
3 you tested?

4 A. Yes, we did.

5 Q. And did you -- did I specifically send -- ask
6 you to have someone from your lab go to the RJ Lee
7 Group to pick up Cashmere Bouquet samples?

8 A. Yes.

9 Q. And one of your analysts named Zach, did he go
10 up to Pittsburgh, or around Pittsburgh, to get the
11 Cashmere Bouquet samples with the -- that was with the
12 RJ Lee Group?

13 A. Yes, he did.

14 Q. And do you -- did you guys have a chain of
15 custody and document what was -- what was a part of
16 that Cashmere Bouquet product?

17 A. Yes, sir.

18 Q. We'll talk about that in a little bit.

19 Oh, did you find -- did you analyze 20 samples
20 from the samples you received?

21 A. Yes.

22 Q. And of the 20 samples of Cashmere Bouquet,
23 historic Cashmere Bouquet, that you analyzed in your
24 laboratory, how many of them had asbestos in them?

25 A. All of them.

1 Q. All 20?

2 A. Yes, sir.

3 Q. This next exhibit that's in evidence, 251.

4 MR. SATTERLEY: May I approach, Your Honor?

5 THE COURT: You may.

6 BY MR. SATTERLEY:

7 Q. This is dated November 24, 1976. This is by
8 Mr. Ashton to Mr. Lee. Once again, it's Exhibit 251.

9 Is this a document you've considered in
10 analyzing this case?

11 A. Yes, I have.

12 Q. And it's signed off by Mr. Ashton, and it's
13 copied to Dr. Semple and Dr. Petterson on Johnson &
14 Johnson letterhead there.

15 And it says -- in 1976 to Mr. George Lee,
16 "Attached is a copy of a disturbing proposal request
17 which the FDA has currently made available to qualified
18 bidders. The scope of the work is the separation of
19 asbestos in foods, drugs, and talc for identification
20 and determination. I find this proposal more
21 disturbing than other proposals up to now because it
22 aims at separation and isolation of asbestos from a
23 wide scope of products and animal tissues. Up to now,
24 our main problems have had to do with the
25 identification, whereas, now it looks like the FDA is

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1 getting into the separation and isolation methodology
2 which will mean concentration procedures. As I have
3 pointed out many times, there are many talcs on all
4 markets which will be hard-pressed in supporting purity
5 claims when ultra-sophisticated assay separation and
6 isolation techniques are applied. Chances are that the
7 FDA proposal will open up the" -- "open up new problem
8 areas with asbestos and talc minerals."

9 Is that the process by which you utilize on the
10 talcs that you analyzed that we're going to talk about
11 later?

12 A. Yes, it is.

13 Q. Does that isolation and separation of asbestos
14 from talc allow you to see under the microscope the
15 asbestos that was present?

16 A. Yes, it did.

17 Q. And have you also, Dr. Longo, had talc samples
18 analyzed by other techniques like XRD or optical
19 microscope analysis where no asbestos was present but
20 then you looked at it by TEM and asbestos would be
21 present?

22 A. Correct. The XRD would be nondetectable.
23 Regular PLM nondetectable in some cases. Some cases
24 you do find it by regular PLM. Where the TEM or the --
25 using heavy concentration method or PLM heavy

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1 concentration method had the highest percentage of
2 positives where the other techniques on the same sample
3 were negative.

4 Q. Based upon your analysis of all -- all aspects
5 of this case, did the FDA ever adopt or require the
6 isolation and separation method and require folks to
7 utilize this to find asbestos in talc?

8 A. No. They never -- they never finalized that.

9 Q. The next document, before our mid-morning
10 break, Exhibit 234.

11 MR. SATTERLEY: May I approach, Your Honor?

12 THE COURT: You may.

13 MR. SATTERLEY: It's already into evidence.
14 Provide a copy to counsel. This is entitled,
15 Exhibit 234, "Proposed Specs for Analyzing Talcs for
16 Asbestos."

17 And the first page is dated May 16, 1973. And
18 this is on Johnson & Johnson letterhead; correct?

19 A. It is.

20 Q. And just to put it into context, this is signed
21 off by Tom Shelley and carbon-copied to a number of
22 other people, including Dr. Fuller, Dr. Goudie,
23 Dr. Nashed, and Dr. Petterson; correct?

24 A. That is correct.

25 Q. And he says, with regards to the third

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1 paragraph, "England is considering method of
2 preconcentrating the asbestos so as to be able to
3 analyze by x-ray. They find no asbestos by doing this
4 with Italian talc. They find, Pooley, 0.05 percent of
5 a tremolite type in Vermont."

6 Is that a document you considered in coming to
7 your opinions in this case?

8 A. It is.

9 Q. And did you find asbestos in Vermont talcs?

10 MR. CALFO: Objection. There's no foundation
11 for that from this document, Your Honor.

12 MR. SATTERLEY: I'm asking a separate question.

13 THE COURT: He asked whether he found it.

14 THE WITNESS: We have.

15 BY MR. SATTERLEY:

16 Q. If we flip over to page 2, under the Pooley
17 method, talking about the -- the preconcentration of
18 asbestos followed by x-ray diffraction analysis.

19 Now, this -- they called this the "Pooley
20 method" here. It says, "This technique has not been
21 written up yet, but evidently when applied to Vermont
22 talc, 0.05 percent of tremolite talc is found. The
23 limitation of this method is that it may be too
24 sensitive."

25 Do you see that?

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1 A. I do.

2 Q. And from a material standpoint -- from a
3 material science standpoint, do you find that the
4 analytical -- the heavy liquid separation is too
5 sensitive?

6 A. No. Saying something is too sensitive in the
7 analytical world makes no sense. You're always
8 striving to get better and better detection limits to
9 be able to fully characterize. That's how all progress
10 is made through the years in analytical equipment:
11 making it better, more sensitive so you can get the
12 information. Now, what you do with that information
13 may or may not use it, but -- it's just something that
14 is foreign to our -- to me that you would say some
15 analytical method is too sensitive.

16 MR. SATTERLEY: Your Honor, it may be a good
17 time for the mid-morning break.

18 THE COURT: What time is it? It's 10:30.

19 MR. SATTERLEY: Is that okay?

20 THE COURT: Sure. We will take our mid-morning
21 break. Come back in 15 minutes.

22 Please remember the admonition that it is your
23 duty as jurors not to converse amongst yourselves or
24 with anyone else on any subject connected with the
25 trial or to form or express any opinion thereon until

1 the matter is submitted to you.
2 Enjoy your break.
3 (Whereupon, the jury having exited the
4 courtroom, the following proceedings were held:)
5 THE COURT: The record will reflect the jurors
6 have departed the courtroom.
7 Is there anything we need to put on the record?
8 MR. SATTERLEY: Nothing from the plaintiff,
9 Your Honor.
10 MR. CALFO: No, Your Honor.
11 THE COURT: Enjoy your break.
12 MR. MULARCZYK: Thank you, Your Honor.
13 (Recess taken.)
14 (Whereupon, the following proceedings were held
15 outside the presence of the jury:)
16 MR. SATTERLEY: We want -- we'd like to put
17 Your Honor on notice that we've agreed that I've met
18 and conferred with counsel that I'm going to use two
19 scales as demonstratives under the Elmo, if I can
20 figure out how to do this, just for -- to -- for the
21 detection limit, not right this second but later this
22 morning. It's a demonstrate testify to show the
23 limitations of detection. And counsel, I've shared
24 this with counsel and both counsel agrees.
25 THE COURT: All right.

1 Ms. Hill, please bring the jury in.
2 What was the last number?
3 THE WITNESS: Your Honor, I think it's 0234.
4 MS. CLANCY: Thank you.
5 (Whereupon, the jury having entered the
6 courtroom, the following proceedings were held:)
7 THE COURT: The record will reflect that all
8 the jurors are in their appointed seats, counsel are
9 present, and William Longo is in the witness box.
10 Please recall that you're still under oath.
11 THE WITNESS: Yes, Your Honor.
12 THE COURT: You may continue with your direct
13 examination of this witness.
14 MR. SATTERLEY: Thank you, Your Honor.
15 BY MR. SATTERLEY:
16 Q. Dr. Longo, we're going to continue to just talk
17 on one more document on -- regarding asbestos and talc.
18 This is Exhibit 350.
19 MR. SATTERLEY: May I approach again,
20 Your Honor?
21 THE COURT: You may.
22 BY MR. SATTERLEY:
23 Q. And this is from the same Tom Shelley we saw
24 earlier. March the 30th, 1973.
25 And is this a document you've considered in

1 evaluating the issue -- issues in this case?
2 A. Yes, sir.
3 Q. And this is carbon-copied to a large number of
4 folks, including many of the folks we talked about
5 earlier: Petterson, Nashed, Hildick-Smith, Rolle,
6 Goudie, Fuller, and Dr. -- or Mr. Dean in England;
7 correct?
8 A. That is correct.
9 Q. And it relates to asbestos talc -- or talc
10 asbestos patents. And Dr. Pooley. It says, "Harold,
11 we will want to carefully consider the Pooley patents
12 re asbestos in talc. It's quite possible that we may
13 wish to keep the whole thing confidential rather than
14 allow it to be published in patent form and thus let
15 the whole world know."
16 Do you see that?
17 A. I do.
18 Q. Have you ever seen any patents developed by
19 Johnson & Johnson or any of the scientists at Johnson &
20 Johnson regarding the concentration technique, heavy
21 liquid separation, to identify asbestos in talc?
22 A. No. None exists that I can tell.
23 Q. Now, you've reviewed, you said earlier,
24 historical testing of baby powder and talcum powder for
25 the presence of asbestos going back into the 1970s and

1 beforehand; correct?
2 A. That is correct.
3 Q. And have you also -- or do you understand that
4 the Shower -- the Shower to Shower product -- you
5 looked at some of the -- Lee Poye's analysis of Shower
6 to Shower; correct?
7 A. We did.
8 Q. And, based upon all the materials you reviewed,
9 do you understand that the Vermont talc was the source
10 of Shower to Shower for many years, including in the
11 1970s?
12 A. That is correct.
13 Q. And is it important to look at the Shower to
14 Shower product and the analysis of Shower to Shower in
15 understanding whether or not asbestos was present in
16 Vermont talcs?
17 A. It is.
18 Q. Now, the concentration method, the heavy liquid
19 separation method, is there a limitation with regards
20 to the ability to see chrysotile with that method?
21 A. There is.
22 Q. And what is that limitation?
23 A. The limitation is the density of chrysotile
24 asbestos is very close to the density of talc.
25 Talc is approximately -- you have 2.7 to

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1 2.6 grams per cubic centimeter. Like a sugar cube, how
2 much that weighs, how many grams will fit in a sugar
3 cube.

4 And chrysotile is about 2.5, 2.4.

5 So you would not expect to see chrysotile using
6 the method as written. It will float up to the top
7 with the talc. Also, anthophyllite asbestos has a
8 density close to talc. If it doesn't have any iron.
9 If it has iron, the density increases and you will --
10 if it's present in the amount necessary, you'll find it
11 by the heavy liquid density separation. So those are
12 the two drawbacks currently for the heavy liquid
13 density separation.

14 Q. Well, those drawbacks that you can't find
15 chrysotile -- the drawback that you can't find
16 chrysotile asbestos with the heavy liquid separation,
17 in your opinion, Dr. Longo, is that a reason why you
18 should never ever, ever, ever use it?

19 A. No. That would be silly. You can find
20 tremolite, actinolite, all the tremolite asbestos solid
21 solution series. The majority of what you find in
22 anthophyllite has iron in it. So -- and, of course,
23 the solid solution series with the other asbestiform
24 minerals that can form when anthophyllites form. So,
25 no. You're -- yeah, it's simple. Why throw the baby

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1 out with the bath water when you can get so much
2 information using that?

3 Q. Historically going back into the 1970s, was
4 Shower to Shower examined for -- and chrysotile
5 asbestos been documented in that product?

6 A. It has.

7 Q. And I'd like to show you what's already
8 admitted into evidence.

9 MR. SATTERLEY: Your Honor. May I approach
10 again?

11 THE COURT: You may.

12 BY MR. SATTERLEY:

13 Q. This is Exhibit 0278, the University of
14 Minnesota Space Science Center.

15 Have you considered this, Dr. Longo, in your
16 analysis of whether or not there's asbestos in Vermont
17 talcs?

18 A. Yes.

19 Q. And does -- was this the analysis of Shower to
20 Shower product back in 19' -- in the early 1970s for
21 the identification of asbestos?

22 A. Yes, sir, it was.

23 Q. If you can flip over to page 4. And do they
24 describe -- and just so that we --

25 Let me zoom out. Zoom out.

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1 The University of Minnesota Space Science
2 Center. Page 4.

3 Do they utilize the electron microscope to
4 identify chrysotile asbestos?

5 A. Yes, sir, they do.

6 Q. And do they indicate that they were taking
7 photographs -- well, first of all, they did a
8 diffraction pattern and they take photographs of the
9 chrysotile asbestos they located in the Shower to
10 Shower product?

11 A. That is correct.

12 Q. And if we flip over to the Figure 17A and 18A.
13 They take a picture of -- it says "S to S grid." And
14 they got a grid number there?

15 A. Correct.

16 Q. And is that -- is that a photograph of a
17 chrysotile asbestos fiber in the Shower to Shower
18 product in the early 1970s by Dr. Hutchinson?

19 A. Yes, sir. That's actually a chrysotile bundle
20 and that's sitting on a foam -- formed -- foam bar grid
21 covering. And that's -- that would be classic
22 asbestos.

23 Q. And over here on the next page, two pages
24 later, page 25 of this exhibit, Figure 18A, once again,
25 Shower to Shower.

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1 Does this demonstrate the chrysotile asbestos
2 in the Shower to Shower product?

3 A. Yes and no.

4 Q. Well, tell me yes and no.

5 A. Yes, it has the morphology and this is what you
6 would expect. But they also, if you go to the previous
7 page, they have their diffraction patterns associated
8 with this. And you can't hardly see it there, but it
9 has some classic streaking on it. That's a little
10 small.

11 But they did two things. It has to have the
12 right morphology tubular structure and then the
13 diffraction pattern showing the right crystalline
14 structure.

15 Q. If we flip to the next page. This one is the
16 one you said "yes and no" to. What about the next page
17 here, Figure 18B, what does this demonstrate?

18 A. Again, it demonstrates bundles of chrysotile
19 asbestos along with the other information, so you have
20 chrysotile here.

21 Q. And does this assist in your opinion -- or does
22 this add to your opinion, I should say, that there is
23 historically asbestos documented in Vermont talc?

24 A. Yes, sir.

25 Q. The next document already into evidence is

1 Exhibit 6 -- 679.

2 MR. SATTERLEY: And request permission to

3 approach, Your Honor?

4 THE COURT: You may.

5 BY MR. SATTERLEY:

6 Q. And this is October 27, 1972. An examination

7 of Johnson & Johnson Baby Powder sent to Dr. Goudie.

8 Exhibit 679.

9 And have you seen and considered this

10 examination by McCrone from 1972, Dr. Longo?

11 A. Yes, sir, I did.

12 Q. And did McCrone -- McCrone laboratory identify

13 asbestos in this examination in 1972?

14 A. They did.

15 Q. By the way, let me talk about McCrone for a few

16 minutes.

17 Walter McCrone, did you know who he was?

18 A. Yes, sir. Everybody does in the microscopy

19 field.

20 Q. Was he recognized as someone that was very --

21 very good at the PLM, the polarized light microscope?

22 A. He was a polarized light microscope expert.

23 Q. As far as his involvement with the transmission

24 electron microscope, was Walter McCrone known to be a

25 TEM person?

1 A. Well, he understood it, but he didn't routinely

2 do transmission electron microscopy. His area and the

3 McCrone Atlas that every PLM lab has was polarized

4 light microscopy of all types of minerals. I mean, he

5 was the one who looked at the Shroud of Turin. He's

6 that good of an optical microscopist.

7 Q. With regards to McCrone laboratory, have you

8 previously in the past stated that McCrone laboratory

9 is an outstanding laboratory?

10 A. Yes, sir, I have.

11 Q. And have you said that they're one of the

12 leaders in the world, McCrone is one of the leaders in

13 the world, in the microscope world?

14 A. Yes, sir. I've worked for some of the same

15 clients that they had done analysis for back in the

16 '70s and '80s where I was defending them and saying,

17 they used McCrone. They used a very good lab to tell

18 them that there was asbestos or not in a product.

19 There was a little -- it was a fertilizer company. So

20 I have stated that a number of times.

21 Q. And was -- when you stated that a number of

22 times, and gave those opinions about McCrone, was that

23 prior to your analysis of all these internal documents

24 you've looked at in talc litigation?

25 A. Yes, sir. It was before that where I was able

1 to get documents from McCrone to start looking at the

2 type of analysis they were doing, and some of the

3 things they were doing -- and you have to understand.

4 Walter McCrone very rarely -- after about 1960 very

5 rarely was in the laboratory. He was running the

6 McCrone Research Center, a nonprofit that did teaching,

7 et cetera. It was others that were actually in charge

8 of McCrone after about 1960 or so. Every now and then

9 he would, but very rarely.

10 Q. And do you have -- have you formed opinions and

11 criticisms of some of the analysts of -- from Walter

12 McCrone that you've seen from looking at some of these

13 McCrone reports involving talc?

14 A. Yes, sir, I have criticized them.

15 Q. And what opinions have you formed?

16 A. Things like, you know, willingness to change

17 little things -- change on reports, saying things like

18 they've never found asbestos in all the talc samples

19 they ever used. That was a letter sent out to a trade

20 organization, even though they had data that showed

21 asbestos, internal data, for their talcum powder or

22 baby powder companies they were working for.

23 So, you know, it changed my opinion a little

24 bit of them. They're still great scientists there, but

25 it sort of -- you know, it sort of was, oh, okay.

1 Q. So, is it fair to say you got analyzed, analyst

2 by analyst, with regards to what they've done

3 historically?

4 A. Not only that, you have to look at what methods

5 they were using. Are they using the best method

6 available? Is the results consistent -- do the results

7 make sense or can they make these statements, like this

8 talc sample -- this talcum powder sample or cosmetic

9 talc sample was negative and therefore it's free of

10 asbestos?

11 Nobody can ever say that. No analytical

12 technique can ever say it's free of anything. All's

13 you can say is, it's down to our detection limit, it's

14 below our detection limit, and it may or may not be

15 there.

16 Making broad statements like there's nothing

17 in -- we didn't find anything so it's asbestos-free or

18 it's -- anything. Like water. Well, we analyzed this

19 water using the EPA method, there's no lead, it's

20 lead-free. You can't say that. All's you can say is,

21 here's the method we used, here's the analytical

22 sensitivity. We can't say if there's anything there or

23 not below that.

24 Q. This 1972 McCrone report, where it's produced

25 to us by Johnson & Johnson, Exhibit 0679, it says, "Do

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1 not use this report. Replace by another version."
2 Have you considered this?
3 **A. I have.**
4 **Q.** And in this report, do they actually document
5 asbestos and talk about asbestos found in Batch
6 Samples 108T and 109T?
7 **A. Yes, sir, they did. They reported it as**
8 **present.**
9 **Q.** And specifically with regard to tremolite, in
10 the report that says, "Do not use this report," do they
11 totally -- do they list the total tremolite content of
12 the two samples would be approximately 0.5 percent for
13 108T and about 0.2 to 0.2 -- 0.2 to 0.3 percent for
14 109T?
15 **A. Yes.**
16 **Q.** And in the new report, the revised report, is
17 it dated the same date?
18 **A. It is.**
19 **Q.** And does it have -- is this information, these
20 numbers and calculations, removed from the report?
21 **A. They are.**
22 **Q.** And then the next document I think it's related
23 to this document here. This is Exhibit 225.
24 **MR. SATTERLEY:** Request permission to approach,
25 Your Honor?

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1 **THE COURT:** You may.
2 **BY MR. SATTERLEY:**
3 **Q.** And just so we're clear, the -- well, let me
4 just withdraw that and go right to this report.
5 225 into evidence. It says, "McCrone study
6 being redone." Something...
7 **A. I think that says, "New one is in master**
8 **file" -- in --**
9 **Q.** Oh. "New one is in master talc file."
10 Do you see that?
11 **A. Yes, sir.**
12 **Q.** And we see this -- over here, it says,
13 "Walter C. McCrone" there?
14 **A. Yes.**
15 **Q.** And if we go to the letter itself, it's dated
16 the same day, October the 27th?
17 **A. Yes, sir, it is.**
18 **Q.** And it says -- this is from a fellow named
19 Ian Stewart.
20 You recognize -- or did you -- you recognize
21 Ian Stewart to be an analyst that worked at McCrone?
22 **A. Yes, sir. He was both a PLM and electron**
23 **optics guy. I've known Ian for almost 30 years.**
24 **Q.** Did Ian Stewart work for McCrone for many, many
25 years before he went to the RJ Lee Company?

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1 **A. Yes, sir, he did.**
2 **Q.** And have you read and seen reports and letters
3 from Ian Stewart many times in the past?
4 **A. Specifically in cosmetic talc it's -- since**
5 **I've been involved in this, but in other litigation in**
6 **the past, especially when he was at the RJ Lee Group,**
7 **yes, sir.**
8 **Q.** It says -- Ian Stewart says, "Here is our
9 report on the baby powder samples. I hope to have the
10 Shower to Shower report out to you soon, but something
11 always seems to break loose when I sit down to write
12 it. Yours sincerely." And it's signed by Ian Stewart;
13 correct?
14 **A. Yes, sir.**
15 **Q.** Moving forward in time, in the '70s, are there
16 many other tests and testing results where McCrone does
17 analysis for talc samples?
18 **A. Yes, sir.**
19 **Q.** And are there instances where McCrone reports
20 there's no asbestos?
21 **A. A lot of instances, yes, sir.**
22 **Q.** And is there reports where McCrone reports
23 there's asbestos present?
24 **A. Yes, sir.**
25 **Q.** I want to show you another document,

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1 Exhibit 158.
2 And this is a -- Exhibit 158 is a confidential
3 document. "New reagent system plant trial at Windsor
4 Minerals."
5 Have you considered this, Dr. Longo?
6 **A. Yes, sir, I have.**
7 **Q.** And how is this significant in your opinions
8 here?
9 **A. It's significant in that they were trying out**
10 **different flotation, meaning, one of the ways to clean**
11 **up the processed talc after it's been milled is to --**
12 **or before milling is to flotote it to -- just like**
13 **concentration method. You put in a type of surfactant**
14 **and it bubbles, sticks to the talc, the big heavy stuff**
15 **and chunks can go to the bottom.**
16 **Here they were experimenting with a way to**
17 **flotote out and remove chrysotile asbestos.**
18 And you have to ask yourself, if there's no
19 asbestos in here, why are you trying to develop a
20 system to remove something that's not in the product?
21 Or not in being milled.
22 So this is important to show -- and we're going
23 to be working on this to see if we can use this
24 technology from that data to concentrate the
25 chrysotile.

1 MR. CALFO: Your Honor, I move to strike. That
2 was complete speculation.
3 THE COURT: The jury will ignore the last two
4 sentences of the witness.
5 BY MR. SATTERLEY
6 Q. Dr. Longo, it says, "The use of citric acid in
7 the depression of chrysotile asbestos and other mineral
8 species has been developed at Windsor Minerals in
9 response to the potential need for a means to exclude
10 extremely low levels of these contaminants from the
11 finished product of the beneficiation process."
12 Correct?
13 A. Yes, sir.
14 Q. Is that what you're talking about with regards
15 to trying to remove asbestos from the product?
16 MR. CALFO: Your Honor, again, objection.
17 Calls for speculation on the part of this witness. No
18 foundation.
19 THE COURT: That -- that's overruled. He's
20 interpreting the document.
21 THE WITNESS: Yes, sir.
22 BY MR. SATTERLEY:
23 Q. It says, "The use of these systems is strongly
24 urged by this writer to provide the protection against
25 what are currently considered to be materials

1 presently" -- "presenting a severe health hazard and
2 are potentially present in all talc ores in use at this
3 time."
4 And it's signed off by Vernon Zeitz; correct?
5 A. That is correct.
6 Q. And health hazards is beyond your area of
7 expertise; correct?
8 A. Yes, sir, it is.
9 Q. And then if we flip over to Table 15 of this
10 1974 document.
11 And it says, "Asbestiform fibers counted by
12 Walter C. McCrone," and it's got "ore, product, ore,
13 product, ore, product."
14 And then it's got fiber identification,
15 "probably chrysotile, probably chrysotile," and the
16 fifth one down has got eight and it says "chrysotile,"
17 and the final one says "chrysotile"; correct?
18 A. Correct.
19 Q. Is this further documentary evidence of the
20 presence of asbestos, in your opinion, in the Vermont
21 ore and product?
22 MR. CALFO: Objection, Your Honor. No
23 foundation. Calls for speculation on the part of this
24 witness.
25 THE COURT: Overruled.

1 THE WITNESS: Yes, it does, especially at these
2 concentrations, because they're talking about counts
3 per EM grid. So these are the number of fibers found
4 on an individual grid at the detection limits that they
5 were using at the time, which were somewhat antiquated.
6 BY MR. SATTERLEY:
7 Q. Moving forward from 1974 to 1975, I would like
8 to present you with what's been admitted as
9 Exhibit 724, dated November the 5th, 1975, from Walter
10 McCrone -- from the McCrone laboratory, Gene Grieger,
11 to Vernon Zeitz.
12 Now, Vernon Zeitz, we saw his name on the last
13 document; right?
14 A. Yes, sir.
15 Q. And this one is -- is written to him from
16 McCrone -- from Gene Grieger, senior research physicist
17 at McCrone; correct?
18 A. That is correct.
19 Q. And does he document and report and have an
20 attachment regarding the presence of -- presence of
21 fibers or bundles with regards to the material they're
22 looking at?
23 A. That is correct. They do.
24 Q. It talks about Table 1 showing "actual fiber
25 counts and the approximate equivalent concentration in

1 parts per million of amphibole particles, which we
2 found in these samples.
3 "Some of them seem rather high. One had ten,
4 and one had nine amphiboles. Most of these come in
5 bundles of one, two, or three fibers, with anywhere
6 from two to five amphiboles in a bundle?"
7 Do you see that?
8 A. Yes, I do.
9 Q. Now -- and then there's a chart on the next
10 page; correct?
11 A. There is.
12 Q. And we see the references here to the
13 amphiboles found; right?
14 Oh, I'm sorry. "Fibers of asbestos found,"
15 correct, Dr. Longo?
16 A. That is correct.
17 Q. And some of these reference to "HC." Do you
18 see the -- the sample being HC?
19 A. I do.
20 Q. And based upon your review of the internal
21 documents, do you have an opinion as to what HC
22 represents?
23 MR. CALFO: Objection. Calls for speculation
24 from this witness. No foundation.
25 THE COURT: Mr. Satterley, you put a circle

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1 around one that's not on the same level even though --

2 MR. SATTERLEY: I'm sorry, Your Honor.

3 THE COURT: Your yellow marker mismarked it.

4 MR. SATTERLEY: I'm upside down. Which one?

5 THE COURT: It's the third one down. That one

6 is not an HC.

7 MR. SATTERLEY: Oh.

8 Oh, it is HC, Your Honor. There's two HCs

9 right beside each other.

10 THE COURT: All right.

11 MR. SATTERLEY: And both of those are HC.

12 THE COURT: Okay. I -- I stand corrected.

13 MR. SATTERLEY: I apologize, Your Honor. I was

14 trying to do it upside down.

15 THE COURT: All right. The objection is

16 overruled.

17 You may respond to the question.

18 BY MR. SATTERLEY:

19 Q. Do you have an opinion about HC and what that

20 represents based upon all the internal documents you've

21 looked at?

22 A. The H stands for Hammondsville, and the C

23 stands for cosmetic.

24 Q. In your opinion, Dr. Longo, is this another

25 instance of confirmed fibers of asbestos in the

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1 cosmetic talc back in 1975?

2 MR. CALFO: Objection. Calls for speculation.

3 No foundation for this witness.

4 THE COURT: That's overruled.

5 THE WITNESS: Yes, it does.

6 BY MR. SATTERLEY:

7 Q. Now, in your testing -- and we're going to get

8 to your testing in a little bit -- you have taken

9 photographs, you've done count sheets, you've done

10 selected area electron diffraction you've done

11 chemistry analysis, EDS; correct?

12 A. That is correct.

13 Q. And you've produced all -- or you've printed

14 all that out and made detailed reports of that and

15 turned it of to the attorneys for these companies;

16 correct?

17 A. That is correct.

18 Q. And in -- in your testing, in your analysis,

19 we're able to look at the actual photographs and the

20 length and the width of the various fibers you found;

21 correct?

22 A. That is correct.

23 Q. Okay. In -- in -- in many of these historical

24 testings -- not all of them, but in many of them -- do

25 we have that same advantage, to look at the

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1 photographs?

2 A. No, most of the time not. Very rare.

3 Q. All right. Do we have most of the underlying

4 raw data, being the chemistry, the selected area

5 electron diffraction, to analyze ourselves to see --

6 see what it says?

7 A. Sometimes you have the selected area electron

8 diffraction and occasionally a count sheet, but it's

9 mostly this type of information, where they just

10 say, "We found this."

11 Q. The next one is Exhibit 713.

12 MR. SATTERLEY: May I approach again,

13 Your Honor?

14 THE COURT: You may.

15 BY MR. SATTERLEY:

16 Q. This is 1977, going forward in time.

17 EMV Associates, you understand that to be a laboratory

18 that Johnson & Johnson sent materials to for analysis

19 on a few occasions?

20 A. Yes, sir.

21 Q. And is this analysis of nine talc samples that

22 you have read and considered in formulating your

23 opinions?

24 A. I have.

25 Q. And is this dated, Exhibit 713, April the 1st,

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1 1977?

2 A. That is correct.

3 Q. By the EMV Associates; correct?

4 A. Yes, sir.

5 Q. And do they have on this -- in this instance,

6 do they have pictures of -- of things we can look at,

7 the chemistry and the morphology of what's depicted

8 there?

9 A. Yes.

10 Q. And is there reference to composite?

11 Do you know what a composite is?

12 A. Composite typically means that you have mixed a

13 couple different sources into something. Say, for

14 example, you take a composite of maybe two different or

15 three different areas of the talc from a mine or -- and

16 make it all one composite so you can try to analyze

17 what's from these two or three different areas.

18 Q. And here, they say, with regards to --

19 Well, first of all, I've heard before

20 composites and blending. Do you know what blending --

21 blending of talc is?

22 A. Blending is -- can be the same thing, but

23 you're just mixing it all together. And typically,

24 blending and milling -- or blending, you're putting in

25 some of the other nontalc ingredients. Just depends on

1 who was saying it.

2 Q. And it says, "Both large and small" -- "A

3 composite, both large and small fibrous tremolite

4 particles found. See Figure 4."

5 And then it says right below that, "Old stock

6 composite, one small fibrous tremolite particle was

7 found. See Figure 6."

8 Do you see that?

9 A. Yes, sir.

10 Q. So if we go over to Figure 4, that's what we

11 were looking at just a few minutes ago; right?

12 A. Yes.

13 Q. And then we've got -- Figure 6 here, we've got

14 more photographs from 1977 with the chemistry; right?

15 A. Yes, we do.

16 Q. If we zoom in on the top photo, "800X," does

17 that mean 800 magnification?

18 A. It does.

19 Q. And the jury heard last Thursday, when Mr. Poye

20 was here, the difference between talc, platy talc and

21 fibrous talc and fibers and asbestiform.

22 Are you able -- from this -- this 1977 photo,

23 are you able to determine, is this fibrous?

24 A. It meets the definition of a -- of fibrous,

25 yes, sir. It's got parallel sides, and it has an

1 aspect ratio easily equal to or greater than 5 to 1.

2 That looks like an aspect ratio more than on the lines

3 of 20, 30, 40 to 1. And we are looking at a bundle.

4 Q. How do we know that's a bundle?

5 A. Well, a bundle is defined as either two or

6 three fibers parallel touching, and if you look closely

7 on the sides or the bottom, you can see what looks like

8 a splayed end coming off, and you can see individual

9 fibers, even from this xerox copy of -- of this

10 photomicrograph, is what we call them. That's a

11 bundle.

12 Q. And I want to use J&J's definition -- this is

13 Exhibit 430, which is into evidence -- on asbestos.

14 And this is a Johnson & Johnson document. The

15 definition here they have for asbestos, under the J4-1

16 and the TM7024 -- and we'll talk about those methods in

17 a little bit -- it says, "Asbestos is defined to be the

18 fibrous serpentine chrysotile and the fibrous form of

19 the amphibole group as represented by amosite,

20 anthophyllite, crocidolite, tremolite, and actinolite."

21 Is that your understanding of the definition of

22 asbestos?

23 A. Yes, sir, the fibrous form of it.

24 Q. And so if we -- if -- if we have a fibrous form

25 of serpentine, curved serpentine, would that

1 definition -- would that meet the definition of

2 asbestos?

3 A. Yes, sir. Either curved or straight. But

4 typically, curved is seen in bulk samples, and every

5 now and then, you will see it in a TEM because of the

6 higher magnification and the smaller particles.

7 But that is a typical definition, fibrous forms

8 of these amphibole -- amphibole groups.

9 Q. Okay. So right here, back -- Ms. Clancy points

10 out -- where it says "fibrous tremolite" under the J&J

11 definition that we just read, does that fibrous

12 tremolite used in their definition equate to asbestos?

13 A. Yes, sir, it does.

14 Q. One other document, and then I'm going to

15 bounce back to heavy liquid for a minute.

16 Exhibit 726, are you familiar with Forensic

17 Analytical out of Hayward, California?

18 A. Yes, sir, I am.

19 Q. And a fellow named Mark Floyd?

20 A. Yes, sir. I know Mr. Floyd.

21 Q. Mr. Floyd, is he an analyst that identifies

22 asbestos in materials and has written in reports in

23 that regard for many years?

24 A. Many years. Doing it almost as long as me.

25 Q. And have -- in fact, have you analyzed or seen

1 his reports with regards to the presence of asbestos in

2 talc?

3 A. Yes, sir, I have.

4 Q. And this into evidence as Exhibit 726. Does

5 this, Dr. Longo, document the presence of asbestos in

6 off-the-shelf Johnson's Baby Powder in 2004?

7 A. Yes, sir, it does.

8 Q. And is -- Mr. Floyd signs off on it right here?

9 A. Yes. That's his -- that's his initials.

10 MR. CALFO: Objection, Your Honor. There is no

11 foundation for this witness to testify about this.

12 MR. SATTERLEY: Let's zoom in.

13 THE COURT: That's overruled.

14 BY MR. SATTERLEY:

15 Q. Do you see Mr. Floyd -- Mark Floyd, his name

16 right there, Dr. Longo?

17 A. Yes, sir, I do.

18 Q. And with regards to this Johnson's Baby Powder

19 off the shelf, "AN" -- it says, "Asbestos type AN."

20 What type of asbestos was he reporting in 2004 on

21 Johnson's Baby Powder?

22 MR. CALFO: Objection. Calls for speculation

23 from this witness.

24 THE COURT: Overruled.

25 THE WITNESS: "AN" stands for anthophyllite.

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1 BY MR. SATTERLEY:
2 Q. And just to understand what has happened here,
3 you understand that this sample was sent to Mr. Floyd
4 by a television -- television station in Sacramento?
5 A. Yes, sir.
6 Q. And does this, in your view, Dr. Longo, add to
7 the -- all the other samples showing the presence of
8 asbestos in Johnson's Baby Powder in the '70s, '80s,
9 '90s, and -- and into the 2000s?
10 MR. CALFO: Objection. No foundation. Calls
11 for speculation from this witness.
12 THE COURT: That's overruled.
13 THE WITNESS: Yes, it does.
14 BY MR. SATTERLEY:
15 Q. Now, we've introduced lots of documents into
16 evidence, and I'm not going to go over all of them with
17 you, obviously, Dr. Longo.
18 But are there other instances in the historical
19 documents regarding Johnson's Baby Powder where
20 asbestos has been documented?
21 A. Yes, sir.
22 Q. Okay. And with regard to Cashmere Bouquet,
23 Colgate-Palmolive, have you also looked at the -- some
24 of the historical documents regarding the presence of
25 asbestos in -- in the Cashmere Bouquet product?

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1 A. Yes, I have.
2 Q. And I'm going to -- not going to go over very
3 many, but there are a few into evidence that I wanted
4 to ask you about.
5 By the way, do you have a whole binder full of
6 Colgate reliance? I think I -- it's on the -- right
7 next to the screen.
8 A. Yes, sir, I do.
9 Q. No. Up. Up.
10 A. I knew they were here somewhere.
11 Q. Okay. But do you have two binders? Are those
12 Cashmere Bouquet reliance materials?
13 A. They are.
14 Q. And do they document, going all the way back
15 into the late 1960s and the 1970s, the presence of
16 asbestos in Cashmere Bouquet?
17 MR. MULARCZYK: Objection. Hearsay. Vague.
18 THE COURT: It's vague. You may rephrase your
19 question.
20 BY MR. SATTERLEY:
21 Q. Okay. Are there many --
22 THE COURT: We don't do that Joe McCarthy
23 business of, "Do you have it in the satchel?"
24 MR. SATTERLEY: I understand. Yes, Your Honor.
25 Yes, Your Honor.

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1 BY MR. SATTERLEY:
2 Q. Do you have reliance lists, Dr. Longo,
3 regarding identification of asbestos before you?
4 A. I do.
5 Q. All right. One of the reliance lists, does it
6 include documents -- this is going to be
7 Exhibit 3584 -- from McCrone to Joe Simko at
8 Colgate-Palmolive in 1974?
9 A. Yes, sir, it does.
10 Q. And we heard from the corporate representative
11 yesterday, Ms. Scala, Diana Scala --
12 THE COURT: Does that have a number on it?
13 MR. SATTERLEY: Yes. This is Exhibit 3584,
14 Your Honor.
15 BY MR. SATTERLEY:
16 Q. And this is February 5, 1974, regarding the
17 samples designated 516. And you considered this,
18 Dr. Longo; correct?
19 A. Yes, sir, I did.
20 Q. And did McCrone report back to Colgate in 1974
21 that all three samples had chrysotile asbestos in them?
22 A. Yes, sir, they did.
23 Q. And in this particular instance, was there
24 photographs taken -- photomicrographs taken -- Scala
25 Exhibit 18 -- this is Scala Exhibit Number -- were

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1 there photomicrographs of -- of the Cashmere Bouquet
2 Sample 516 by McCrone back in 1974?
3 A. Yes, sir.
4 Q. And what we've got displayed on the screen
5 here, based upon what McCrone reports in 1974 and based
6 upon your analysis of -- of -- of this report, do you
7 have an opinion whether this is documenting asbestos?
8 A. It shows what asbestos -- what chrysotile
9 asbestos would look like under the transmission
10 electron microscope.
11 Q. And you talked about both straight and curved.
12 Does it show some curved fibers?
13 A. Fibers and bundles, yes.
14 Q. Okay. And is this just one instance of the
15 identification of asbestos in the -- in the Colgate
16 product?
17 A. Yes, sir.
18 Q. And we know other photographs here -- let me
19 just -- too many papers here.
20 Dr. Longo, in 1974, does McCrone report back to
21 Colgate that it's a chrysotile fiber in the North
22 Carolina Regal sample?
23 A. Yes, they do.
24 Q. And when we get to your photographs in a little
25 bit, do you have photographs where you have materials

1 that look like -- is that platy talc at the top?

2 A. It's either platy talc or calcium carbonate or

3 one of the other accessory minerals. That's not

4 typically a talc look.

5 What's more like talc is at the top of the

6 chrysotile fiber. It's more of a plate shape, little

7 irregular plate shape. That, in my opinion, is what

8 the morphology of platy talc should look like.

9 Q. Is that, in your view, fiber?

10 A. Yes, sir. That meets all the current regulated

11 asbestos definitions by transmission electron

12 microscopy. It has parallel sides and has an aspect

13 ratio, the length divided by the width, of 5 to 1 or

14 greater. That's, oh, probably in the 20- to 30-to-1

15 range.

16 Q. The previous photograph here, does it say

17 "chrysotile fibers" here at the bottom?

18 A. Yes, sir, it does.

19 Q. And is that, in your opinion, a fiber,

20 Dr. Longo?

21 A. Yes, sir. That meets the definition. There

22 are counting rules for determining fibers of asbestos

23 or bundles. That's classic.

24 Q. Is -- is there, in this photograph, examples of

25 the talc or talc particles blocking part of the view of

1 fiber -- a chrysotile fiber?

2 A. Yes, sir. You can see at the top end of the

3 fiber, it looks like we have a talc -- very large talc

4 plate laying over it. Then you have some smaller talc

5 plates to the right of the fiber.

6 So that's a pretty heavily loaded sample, to

7 see that much in one area of the TEM. TEM grid.

8 Excuse me.

9 Q. Now, in regards to your opinions on historical

10 identification of asbestos in Cashmere Bouquet, other

11 than McCrone, are there other laboratories that have

12 likewise found asbestos in the Cashmere Bouquet

13 product?

14 A. Yes, sir.

15 Q. And have you included those in your reliance

16 materials?

17 A. I have.

18 Q. And who are some of the other laboratories?

19 MR. MULARCZYK: Objection. Hearsay.

20 THE COURT: Overruled.

21 THE WITNESS: Besides McCrone, you have -- oh,

22 god, I'm having a mental...

23 There's -- there's -- I'm sorry.

24 BY MR. SATTERLEY:

25 Q. Yeah, you've got your binders there.

1 A. Yeah, let me just look.

2 Q. It's not a memory test.

3 A. I'm trying to go off -- yeah, test -- memory

4 test.

5 Mt. Sinai. We have, you know, some of the FDA

6 work in the early years. Johns-Manville. Cyprus, I

7 believe, did some testing. So there was some others.

8 Q. Is -- did Johnson -- in your materials, did

9 Johnson & Johnson --

10 A. Johnson & Johnson, too. I'm sorry.

11 Q. And Fred Pooley, specifically?

12 A. Yes, sir.

13 Q. And Mark Floyd at Forensic Analytical, did --

14 does his lab at Hayward look at Cashmere Bouquet and

15 found asbestos?

16 A. I believe so.

17 Q. Now, heavy liquid separation. Historically,

18 you mentioned Dr. Pooley did heavy liquid separation

19 and found asbestos in talc; correct?

20 A. Correct.

21 Q. You mentioned that -- and we showed

22 documents -- at Dartmouth, Dr. Reynolds looked at

23 heavy liquid -- heavy liquid separation and found

24 asbestos in talc?

25 A. Correct.

1 Q. Have you reviewed the test, the test results --

2 excuse me -- the testimony of Dr. Alice Blount?

3 A. I have.

4 Q. And have you seen her published paper?

5 A. Yes, sir. In 1990, 1991, peer-reviewed

6 published paper doing the exact same thing.

7 Q. And using the heavy liquid separation, did

8 Dr. Blount report and publish upon asbestos in talc

9 products?

10 A. Yes, sir.

11 Q. And specifically into evidence is Exhibit 160,

12 is the letter from Dr. Blount to one of the attorneys

13 for Johnson & Johnson in 1998.

14 And have you considered this with regards to

15 Sample I?

16 A. Yes, sir, I have.

17 Q. And in 1998, this letter indicated that

18 Sample I was Vermont, Johnson & Johnson talc; correct?

19 A. Yes, sir. It was a Johnson & Johnson

20 off-the-shelf product. And in that time period, it

21 would have been from Vermont. 1989, 1990, the talc

22 source was Vermont during that time.

23 THE COURT: Mr. Satterley, I neglected to write

24 down the exhibit number. I don't know whether you said

25 it or not.

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1 MR. SATTERLEY: 160, Your Honor.
2 THE COURT: Thank you.
3 BY MR. SATTERLEY:
4 Q. And you understand that -- Dr. Blount to be a
5 geologist/mineralogist?
6 A. Yes, sir.
7 Q. And have you considered her, not only her
8 published work but her testimony and her handwritings
9 and her letters back in the '90s regarding her testing
10 of this product?
11 A. In her published paper.
12 Q. Okay. So we've got Dr. Pooley, Dr. Reynolds,
13 Dr. Blount, Lee Poye, and MAS, your lab. In all five
14 of those instances, when heavy liquid separation was
15 done with regards to looking for asbestos in cosmetic
16 talc products, were asbestos identified?
17 MR. CALFO: Objection, Your Honor. There is no
18 foundation for -- for all those.
19 THE COURT: It's overruled.
20 THE WITNESS: Yes, sir. Asbestos was
21 identified using the heavy liquid density separation
22 method, both the protocol, or the method, for TEM as
23 well as PLM, where we actually used the Blount method
24 that she published in 1990.
25 BY MR. SATTERLEY:

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1 Q. Now, in all the materials you reviewed, have
2 you seen, since the Blount publication -- since the --
3 in -- in the early 1990s -- have you seen Johnson &
4 Johnson testing where they tested their talc by heavy
5 liquid separation at any time in the last 28 years,
6 since that paper was published?
7 A. No, sir, I've never seen any documents saying
8 that they were using...
9 Q. At any point in time, have you seen any
10 documents that Colgate-Palmolive or any of their
11 analysts tested their talc by using the heavy liquid
12 separation method?
13 A. No, sir.
14 Q. Now I want to talk about negative tests.
15 You mentioned limitations of XRD. Tell us your
16 opinion about reports regarding XRT -- XRD that report
17 nondetect, from an analytical standpoint, for the
18 identification of asbestos in talc. What does that
19 mean to you?
20 A. It means that the concentration of asbestos, if
21 present, wasn't greater than the detection limit,
22 which, for XRD, is pretty high, depending on what
23 you're looking at.
24 So your detection limit in XRD is probably -- a
25 really good XRD with good technicians may be for

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1 tremolite .2, .3 percent by weight. Today, you may get
2 down to .1. But in the '70s, it was around .4, .5.
3 Anthophyllite is even higher, and so is
4 chrysotile.
5 So using XRD and getting a negative in XRD only
6 tells you is -- there's not a -- really a lot of
7 asbestos in here, and that's it.
8 Q. With regards to the use of XRD, have you
9 studied the -- what's called the J4-1 method?
10 A. Yes, sir.
11 Q. And is it your understanding that the J4-1
12 method was a method adopted by industry -- the
13 Cosmetics, Toiletries and Fragrances Association -- in
14 1976?
15 A. Yes, sir, it was.
16 Q. And did the J4-1 method have the x-ray
17 diffraction as the first step in the process?
18 A. They did.
19 Q. And did J4-1 method -- did the J4-1 method ever
20 include a TEM analysis?
21 A. No, sir.
22 Q. Did the J4-1 method ever include heavy liquid
23 separation?
24 A. It did not.
25 Q. Did the J4-1 method have a stop, you stop

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1 analyzing, if you don't find anything by x-ray
2 diffraction or optical microscope?
3 A. I'm sorry. Could you repeat that?
4 Q. Sure. Let me just show you what's already into
5 evidence. It's 727.
6 This is the -- this is the J4-1 -- the actual
7 J4-1 method into evidence. It says "J4-1" over here.
8 Over here.
9 A. Yes, sir. I'm familiar --
10 Q. You recognize that, sir?
11 A. I'm familiar with this document.
12 Q. Okay. And at the bottom, it's got, "x-ray
13 diffraction" here, "acid leach" over here, "optical
14 microscopy," and then "fibrous morphology," and "stop.
15 Stop. Stop."
16 Do you see that?
17 A. Yes, sir.
18 Q. All right. So your understanding of the way
19 the J4-1 method works is, if you don't find anything in
20 the --
21 A. X-ray diffraction.
22 Q. -- x-ray diffraction showing amphibole, you
23 stop; correct?
24 A. Correct.
25 Q. Okay. So -- but if you do find a peak, then

1 you would go over to the optical microscopy and look
2 for fibrous materials; correct?
3 **A. Correct.**
4 **Q.** And if you don't find anything, you stop?
5 **A. Correct.** Well, if you do find, you stop. It
6 says, "Asbestiform amphiboles present." If you don't
7 find it, it's stop to the right, which says
8 "Asbestiform amphiboles absent."
9 That's -- so it was "as soon as you find a
10 negative test, you stop" type of protocol.
11 **Q.** Based upon analytical techniques and what was
12 known, do you have an opinion whether or not this was
13 an appropriate technique for the already -- the
14 identification of asbestos?
15 **MR. CALFO:** Objection, Your Honor. This
16 witness had no knowledge of what was known in the '70s.
17 **THE COURT:** That's overruled. He may opine.
18 You can cross-examine him about it.
19 **THE WITNESS:** It's an appropriate method to
20 find out information, but you have to be very careful
21 with it, if you understand the detection limits. There
22 is products out there that has enough asbestos in it
23 that it's fine.
24 But when you're dealing with cosmetic talcs and
25 you're dealing with trace levels, the XRD method is --

1 should be done with -- very carefully.
2 Today, it's -- I don't think it's worthwhile to
3 analyze by XRD at all for Italian and Vermont talcs.
4 It doesn't give you -- even if it's positive, you can't
5 determine if it's fibrous or not because it doesn't
6 give you morphology. So why do it?
7 **BY MR. SATTERLEY:**
8 **Q.** Exhibit 171 is the CTFA minutes, 1977. And it
9 says, with regards to the J4-1 method --
10 First of all, just -- you -- you've looked --
11 you reviewed the CTFA minute meetings; correct?
12 **A. Yes, sir, I have.**
13 **Q.** It says, with regard to the J4-1, "Test and
14 verify CTFA Method J4-1 for this purpose: Assurance
15 that method is accurate, reliable, and practical. He
16 reported" -- "He then reported these objectives have
17 not yet been achieved."
18 And it's reported in 1977 that six out of the
19 seven labs failed to identify spiked talc with
20 asbestos; correct?
21 **A. With tremolite.**
22 **Q.** And from an analytical standpoint, does this
23 demonstrate the inadequacies or the weaknesses of the
24 XRD method?
25 **MR. CALFO:** Objection, Your Honor. Calls for

1 speculation on the part of this witness.
2 **THE COURT:** Overruled.
3 **THE WITNESS:** Yes. It has -- it has detection
4 elements. So if you do a spiked sample and you can't
5 find it, then how can -- for this particular asbestos,
6 how can you find it in an unknown sample?
7 It's -- it's just not a very good method for
8 these types of analysis of cosmetic talc. Even today,
9 with state-of-the-art equipment, the concentrations
10 that are typically present are going to be lower than
11 what the XRD can see.
12 And couple that with the fact you can't tell if
13 it's fibrous or not, is -- is an issue.
14 **BY MR. SATTERLEY:**
15 **Q.** And it's referring to a "Dr. Schelz,"
16 S-c-h-e-l-z, "then proposed a round-robin partial
17 retest."
18 Do you see that?
19 **A. Yes, sir.**
20 **Q.** And then I'd like to show you what's into
21 evidence and what you considered, 233. This is
22 Johnson & Johnson document, March 1, 1978, to Charles
23 Haynes at the Cosmetics, Toiletry and Fragrance
24 Association.
25 And it's talking about the -- "I'm enclosing a

1 table which breaks the code for the recently completed
2 CTFA task force on round-robin testing of the consumer
3 talcum products for asbestiform amphibole minerals."
4 Do you see that?
5 **A. Yes, sir, I do.**
6 **Q.** It says, "The names and addresses and phone
7 numbers are also included for those individuals who
8 participated whose products were involved."
9 Do you see that?
10 **A. Yes, I do.**
11 **Q.** And he -- he writes in this confidential 1978
12 memo, which is Exhibit 233, "Please contact me" -- and
13 there's a phone number -- "upon receipt of this letter
14 so that I may destroy the only other copy of this
15 table, which is in my possession."
16 Have you ever seen, Dr. Longo, the table that
17 would break the code regarding the round-robin?
18 **A. No, sir.**
19 **Q.** It says on the second -- on this Johnson &
20 Johnson letterhead, second page, "Destroy your copy of
21 the table. Your participation in the final important
22 phase of the round-robin is appreciated. Thank you
23 very much.
24 "Sincerely, John P. Schelz, Chairman, CTFA task
25 force on round-robin testing of consumer talcum

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1 products."
2 Do you see that?
3 **A. Yes, I do.**
4 **Q.** And he carbon copies the vice-president of
5 science of the CTFA, Dr. Estrin; right?
6 **A. Yes, sir.**
7 **Q.** And also someone from the Bristol-Myers
8 Products Company; correct?
9 **A. That is correct.**
10 **Q.** And on the last document, Ms. Clancy points out
11 that John Schelz is identified as the chairman of the
12 CTFA task force.
13 Do you see that?
14 **A. I do.**
15 **Q.** Now, you've seen and evaluated many documents
16 from Johnson & Johnson, or their consultants, where it
17 says "nondetect."
18 Have you --
19 **A. I have.**
20 **Q.** -- not?
21 **A. Yes, sir, I have.**
22 **Q.** And have you identified and seen many documents
23 where it says they're looking for asbestos and they're
24 saying "nonquantifiable"?
25 **A. I have.**

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1 **Q.** How can -- if you are of the opinion that
2 there's asbestos in these cosmetic talc products, how
3 can that possibly be when there are so many documents
4 that say "nondetect"?
5 **MR. MULARCZYK:** Calls for speculation.
6 **MR. CALFO:** It calls for speculation from this
7 witness.
8 **THE COURT:** That's overruled.
9 **THE WITNESS:** It's all about the sample
10 preparation and detection limit, the reason you would
11 have a nondetect. And there is a lot of nondetect
12 analysis by TEM for Johnson & Johnson. But it's all
13 about the detection limit.
14 If you set -- if you have a detection limit
15 that is higher than most, anytime that others,
16 including me, have found asbestos in the product, then
17 it's not surprising. If your method is not sensitive
18 enough, you're not going to detect it. You have to
19 have -- if your detection limit is up here but your
20 asbestos level is down here -- and think of a line,
21 can't find it if it goes below this detection limit --
22 and it's down here, you're going to have negative after
23 negative after negative. When you do find it, you've
24 hit those one or two samples that has a very high
25 concentration of asbestos in it.

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1 It's all about the sample preparation and how
2 you do the analysis. If you can have a really
3 sensitive method or not.
4 **Q.** You talked about the tools you use. As a
5 demonstrative, I have two tools. I've got a bathroom
6 scale that I got at Walgreen's.
7 Do you see it says "Walgreens" on it there?
8 **A. Yes.**
9 **Q.** And I've got this type of scale, which -- what
10 do you call this type of scale?
11 **A. I would call that a jeweler scale.**
12 **Q.** And if we --
13 **A. A not -- a "not very sensitive one" jeweler**
14 **scale. But it should work for what you're doing.**
15 **Q.** So, for example, in thinking about detection
16 limit, if we have this -- and I've got a half-full box
17 of paperclips -- and we put it on the scale, the
18 bathroom scale I got at Walgreen, does it detect
19 anything?
20 **A. No. It's not -- it doesn't have a sensitive**
21 **detection limit.**
22 Now, you would -- not looking what's there, you
23 didn't know that, you would report that there's nothing
24 there. There's nothing on the scale. But that doesn't
25 make that half a box of paperclips disappear. So you

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1 can't say there's nothing there unless you know what
2 your detection limit is, et cetera. It's all about the
3 sample prep.
4 **Q.** This one I don't know how to use.
5 **A. Don't forget -- don't forget the tear button.**
6 **Q.** Okay. So let's move this off here. And put
7 this on.
8 **MS. CLANCY:** True it.
9 **BY MR. SATTERLEY:**
10 **Q.** True it.
11 All right. Let's see what happens here.
12 Now, this scale is more sensitive. Does it
13 detect and pick up the same paperclips that we couldn't
14 pick up with the bathroom scale?
15 **A. Yes, sir. It's more sensitive, so now you have**
16 **a scale that has a better, more sensitive detection**
17 **limit. And that's what we have done and others have**
18 **done using this concentration method to increase the**
19 **sensitivity.**
20 **Q.** Now -- so the two expressions, or the two --
21 does "ND," does that stand for nondetect?
22 **A. Correct.**
23 **Q.** Like you -- there's many reports that say
24 nondetect with regard to samples; correct?
25 **A. Correct. When they did the analysis, they did**

1 not detect any asbestos. So they put in, you know, ND.
2 Q. And then there's NQ.
3 What does "NQ" represent?
4 A. In these tests, because you don't see this very
5 often at all, NQ would mean nonquantifiable.
6 Q. And are you familiar with the test method
7 written by Johnson & Johnson called 7024, TM7024?
8 A. Yes.
9 Q. And have you analyzed in great detail the Test
10 Method 7024?
11 A. Yes, sir, I have. It's a TEM method.
12 Q. And the 7024 method for the identification of
13 asbestos, in your opinion, does it have limitations?
14 A. Yes, sir, it does.
15 Q. And what limitations does the TM7024 have?
16 A. Well, you start off with the biggest one. It
17 doesn't use the heavy concentration method to prepare
18 the sample.
19 So you have to dilute the sample, say -- again,
20 we'll go back to the 30 or 40 milligrams.
21 50 milligrams talc. In order to make it where you can
22 get it on these little TEM grids, you may have to
23 dilute that a thousand times.
24 So you start off with that. The second problem
25 with it is that it uses this "got to find five fibers."

1 And because you dilute it so much, it doesn't allow
2 you -- let me go back before that.
3 It doesn't allow you to expand the area you're
4 looking at.
5 So, if we're in this courtroom and we're
6 looking for our -- you got a -- a good example of this:
7 You got an acre of grass, high grass, and somebody asks
8 you, can you go find the ten golf balls that might be
9 out there? But we're only going to let you look at
10 this little area over here and see if you find
11 anything.
12 Well, that's what happens with this method.
13 You're looking at these little TEM grids and it doesn't
14 allow you to expand the area to keep looking to see if
15 you can get a better sensitivity.
16 So, if I'm only allowed to look at a little
17 area of that one acre versus walking around the whole
18 acre, which -- which one of those tests have I -- have
19 a better chance to run into those golf balls?
20 And that's the second problem with this. They
21 give you a time limit to how long you can spend doing
22 the analysis.
23 Q. Well, let me -- let me -- so time limit.
24 But let me go back to this.
25 You said five fiber requirement?

1 A. Of any one type of asbestos.
2 Q. Explain that.
3 A. Well, if I analyzed the sample, with all the
4 limitations it has on it, and I find four tremolite
5 fibers, they will say that is nonquantifiable because
6 you have to find five to make it, quote, above
7 background.
8 Not even -- to me, it even makes it a little
9 bit worse. If you find four tremolite asbestos fibers
10 and four actinolite asbestos fibers -- now, those two
11 are related; a little bit more iron in the tremolite
12 chemistry will give you actinolite -- you still say
13 it's nonquantifiable because you didn't have five
14 actinolite and five tremolite or more. Now, say you
15 have four tremolite, four actinolite, and four
16 anthophyllite asbestos. It's still nonquantifiable
17 because you don't have five of each.
18 So, instead of just going, okay, here's what it
19 is, we found these five, this is the concentration, but
20 we don't believe it's above background, even though
21 there is no background of this, that would be a way to
22 at least give you the information and make a decision,
23 but the reports just say nonquantifiable.
24 Q. And have you seen instances where an analyst at
25 McCrone named Kent Sprague writes letters regarding

1 analysis of talc and says, there's no asbestiform
2 minerals there, but we see the backup sheet and the
3 backup data and we see, in fact, that there was
4 asbestos present?
5 A. Yes, sir.
6 Q. This is Exhibit 174, which is into evidence.
7 And, for example, this letter right here, Exhibit 174,
8 is dated 1990. And Kent Sprague reports no
9 quantifiable asbestiform minerals; right?
10 A. Yes, sir.
11 Q. All right. And in this instance, we have some
12 of the backup data. A count sheet. And by the way, in
13 most of the reports where it says nonquantifiable, do
14 we have the backup data?
15 A. No. Just about all of them we do not.
16 Q. There's only a few examples of the backup data,
17 the count sheets like we've got here?
18 A. Yes, sir.
19 Q. All right. In this backup data, does it
20 demonstrate anthophyllite present?
21 A. It does.
22 Q. And does it give the length and the width?
23 A. Yes. The length is 20 and a width is 1.5,
24 which is probably more likely than that a bundle. And
25 if you divide 20 by 1.5, you would have an aspect ratio

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1 of about 7 and a half to 1.

2 Q. And in -- would that -- does that meet the
3 definition, anthophyllite, of regulated asbestos?

4 A. Yes, sir. It meets that definition as well as
5 the aspect ratio definition of the 7024 method.

6 Q. And so is this an example of, if you just rely
7 upon the report that says no quantifiable asbestos and
8 don't have the backup data, you would be misled into
9 believing there's no asbestos present?

10 MR. CALFO: Objection. Calls for speculation
11 on the part of this witness.

12 THE COURT: That's overruled.

13 THE WITNESS: Yes, sir. It would be very
14 unclear what that -- for somebody like me very unclear
15 what that means, nonquantifiable. It's either you can
16 count it or you -- or it's not there and you don't.

17 BY MR. SATTERLEY:

18 Q. And in this specific sample also -- we go a
19 couple pages over. Chrysotile. The structure is a
20 fiber. Type is chrysotile. And the length and the
21 width. And it says SAED -- SAED and EDS checked off
22 yes; right?

23 A. Yes, sir.

24 So, again, it's chrysotile asbestos and it --
25 they have all the right boxes checked for it to be

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1 asbestos.

2 Q. And the next page -- and, in fact, at the
3 bottom of the next page it says "chrysotile fiber";
4 correct?

5 A. Yes, sir.

6 Q. All right. So in this one -- in this one
7 letter where it says no asbestiform by McCrone, the
8 McCrone Group, no quantifiable amounts of asbestiform,
9 we have two instances of asbestos, chrysotile asbestos
10 fiber and anthophyllite asbestos fiber; correct?

11 A. That is correct.

12 Q. That's Exhibit 174.

13 Now, the -- back to the method. The 7024.
14 It's into evidence as Exhibit 172. It's the actual
15 J&J Method 7024.

16 You've read this in detail; correct?

17 A. I have.

18 Q. And this is a J&J method specification;
19 correct?

20 A. Yes, sir, it is.

21 Q. Background correction. Now, what is that?

22 A. Background correction is that there is stray
23 asbestos fibers floating around in the air that somehow
24 gets on the sample and could confound the results. Or
25 that your laboratory you're using or your lab you've

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1 got cross-contamination because you've got some stray
2 asbestos fibers getting in with the analysis.

3 So they call it background correction.

4 Q. And in the protocol and specification, what
5 does J&J say about background correction? Says it has
6 not been necessary. How is that significant or
7 important?

8 A. Well, it's significant because it verifies the
9 same thing we say. For these types of asbestos,
10 tremolite, actinolite, anthophyllite -- you do not have
11 background levels of this material. It's not used
12 in -- in very few asbestos products. Labs don't
13 typically have that poor of laboratory use that they
14 will cross-contaminate. So there's no such thing as
15 a -- ambiguous background level. Asbestos fibers are
16 heavier than air. They do not stay in the air for
17 eternity. They fall out, obeying the basic laws of
18 gravity. You don't have this, quote, background
19 causing contamination levels that somehow interfere in
20 your analysis. And I agree with that. We have seen no
21 background contamination in any of the processed
22 blanks, any of the QCs that we've done on any of these
23 samples. The filters doing the exact same type of
24 analysis are clean, so, therefore, below detection
25 limit of the analysis.

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1 Q. So you're running blanks to make sure you don't
2 have contamination in the lab?

3 A. Correct. Blanks. Processed blanks where you
4 do the exact same thing you did to the sample you're
5 analyzing, except you don't put talc in it: heavy
6 liquid, centrifuge, the whole thing. And we analyze
7 the exact same area.

8 Q. So with J&J, when they say, "Background
9 contamination" -- "Background correction has not been
10 necessary, the amount of background asbestos detected
11 has been insignificant in comparison to the levels of
12 asbestos found in contaminated samples," do you agree
13 with that?

14 A. I agree that it's been insignificant. It's --
15 essentially, in our lab and others, it doesn't exist.
16 So it does not interfere with the analysis. So when
17 you find a single fiber or a single bundle in the
18 analysis of tremolite, actinolite, anthophyllite, it is
19 significant. It shows that that came from the cosmetic
20 talc itself and not from some stray contamination out
21 of the lab, in the air from somewhere, what -- whatever
22 it may be.

23 Q. Last question before lunch.

24 MR. SATTERLEY: Can I get one more question in,
25 Your Honor.

1 THE COURT: I was going to cut you off right
2 there.
3 MR. SATTERLEY: I saw you were going to cut me
4 off.
5 THE COURT: I was going to. One important
6 question.
7 BY MR. SATTERLEY:
8 Q. It's preparation and analysis time.
9 Preparation time per sample, including preparation of
10 related materials is one hour.
11 In your opinion, Dr. Longo, is that reasonable?
12 A. Not for what we do on the heavy liquid
13 separation, on the preparation, one hour. We don't --
14 we don't give time limits to our scientists at the
15 laboratory to either prepare a sample or to analyze the
16 sample. Their only requirement is to do it right.
17 MR. SATTERLEY: Now would be a good time for
18 lunch, Your Honor.
19 THE COURT: Ladies and gentlemen. We are going
20 to go to lunch and come back at 1:30.
21 Remember the admonition that it is your duty as
22 jurors not to converse amongst yourselves or with
23 anyone else on any subject connected with the trial or
24 to form or express any opinion thereon until the matter
25 is submitted to you.

1 Enjoy your lunch. See you back in an hour and
2 a half.
3 (Whereupon, the jury having exited the
4 courtroom, the following proceedings were held:)
5 THE COURT: The record will reflect that the
6 jurors have departed the courtroom.
7 Is there anything you need to talk about?
8 MR. SATTERLEY: Not from the plaintiff's
9 perspective, Your Honor.
10 MR. CALFO: No, Your Honor.
11 MR. MULARCZYK: No, Your Honor, thank you.
12 THE COURT: All right. I will see you at 1:30.
13 THE WITNESS: Thank you, Your Honor.
14 (Lunch break taken.)
15 (Afternoon Session)
16 (Whereupon, the following proceedings were held
17 outside the presence of the jury:)
18 THE COURT: All right. We're back in session.
19 Is everybody here?
20 Okay. All counsel are here, it appears.
21 Ms. Hill, please bring in the jury.
22 (Whereupon, the jury having entered the
23 courtroom, the following proceedings were held:)
24 THE COURT: Good afternoon, ladies and
25 gentlemen. The record reflect will that the jurors are

1 all in their preassigned seats, counsel is at counsel
2 table, and Mr. Longo is back in the witness box.
3 You will recall you're still under oath?
4 THE WITNESS: Yes, Your Honor.
5 THE COURT: Mr. Satterley, you may continue
6 with your direct examination of this witness.
7 MR. SATTERLEY: Good afternoon, Dr. Longo.
8 Good afternoon, everyone.
9 THE WITNESS: Good afternoon.
10 BY MR. SATTERLEY:
11 Q. We left off talking about the Johnson & Johnson
12 TM7024 and the -- where we were talking about the
13 preparation and analysis time. I read to you,
14 "Preparation time per sample, including preparation of
15 related materials, is one hour."
16 How long does the prep time take in your lab
17 for heavy liquid separation analysis?
18 A. Probably two hours. Two to three hours to do
19 multiple samples.
20 Q. It says, under this J&J method, TM7024.
21 "Analysis search time." Search time. Does that mean
22 looking under the microscope looking for the asbestos
23 fibers or bundles?
24 A. Yes, sir.
25 Q. It says, "The search time per sample is a

1 maximum of two hours."
2 Correct?
3 A. That's what it states.
4 Q. And, from an analytical point of view, you
5 believe it's appropriate, or -- is it even possible to
6 find 20 different asbestos fibers or bundles in a
7 two-hour time frame?
8 A. No. That would be impossible.
9 Q. Is it appropriate, in your view, to put an
10 arbitrary time limit like two hours for searching for
11 asbestos in a sample?
12 A. No. Because, to me, that puts pressure on the
13 microscopist to get done. It's more preferable to let
14 the microscopist take the time he needs till he feels
15 satisfied that he has an adequate search and/or
16 adequate analysis. A sample that may have 15 or 20
17 asbestos fibers in it, it'd probably take two full
18 days.
19 Q. Also on the Exhibit 172, under Section 13,
20 there is a -- I got this one highlighted. This is
21 still 172. Page 7. I'm going to figure this thing out
22 eventually.
23 Under definition of fiber: It says, "An
24 elongated particle with parallel sides and an aspect
25 ratio K" -- oh, "greater than 3 to 1."

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1 Do you see that?
2 A. Yes, sir.
3 Q. Is it your understanding that's Johnson &
4 Johnson's definition of a fiber, that's greater than
5 3 to 1?
6 A. Yes, sir.
7 Q. And in some of the regulatory definitions, does
8 regulatory -- some of the regulatory definitions
9 describe a fiber as being greater than 3 to 1?
10 A. Well, that's greater than or equal to 3 to 1.
11 Some of the OSHA documents for fibers are greater
12 than -- greater than or equal to 3 to 1. So that
13 follows along the Federal Government on occupational
14 exposure for sizes of the fiber -- for the aspect ratio
15 of the fibers.
16 Q. And it says, "The definition employed may vary
17 with the needs of the client."
18 Do you see that?
19 A. Yes.
20 Q. Have you seen in any of the regulatory
21 framework -- whether it be OSHA, EPA, ISO -- that the
22 definition of what a fiber is needs to vary depending
23 upon who the client is or what the client needs?
24 A. No. There's two definitions of fibers on
25 aspect ratios. One is greater than or equal to 3 to 1

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1 for occupational exposure analysis and the other one is
2 the standard TEM analysis where it's greater than or
3 equal to 5 to 1 aspect ratio. Those are the only two
4 aspect ratios that I know of for optical microscopy or
5 transmission electron microscopy.
6 Q. This 7024, this method that we've been talking
7 about, is this generally accepted in the scientific
8 organizations as a proper way to analyze samples for
9 the presence of asbestos?
10 A. It's not in any of the standard protocols.
11 Using this type of method it has evolved since then.
12 And it's -- you know, in order to be fair, there's been
13 this running debate, is it McCrone's method or is it
14 J&J's method, depending on who you ask.
15 Q. The -- let's switch gears now and take this to
16 the side, and let's go to -- let's go to testing and
17 testing results.
18 What is the NIST or the NIST standard?
19 A. That is the National Institute of Standard and
20 Technology, and all laboratories that are certified or
21 doing this work should have a NIST standard for all the
22 regulated asbestos. They sell you a bottle of
23 tremolite asbestos that's certified by the National
24 Institutes of Standard and Technology, and a bottle of
25 anthophyllite, chrysotile, amosite, crocidolite. And

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1 it's a requirement to have these standards in your lab
2 for your certifications.
3 MR. SATTERLEY: May I approach, Your Honor?
4 THE COURT: You may.
5 BY MR. SATTERLEY:
6 Q. This is marked for identification purposes only
7 as 1046. Is this a NIST standard of tremolite asbestos
8 that your laboratory has and photographs were taken by
9 your laboratory?
10 A. Yes. This is our NIST standard for tremolite
11 and those are our photographs.
12 Q. And we're going to display now the 1046. And
13 it's hard to see. But does it say "1867 bulk asbestos
14 uncommon" and then identifies tremolite?
15 A. Yes.
16 Q. And did your laboratory take the NIST standard,
17 put it under the TEM, and take photographs of it so
18 that we could see what the standard tremolite asbestos,
19 according to the National Institute of Standards and
20 Technology, what it looks like?
21 A. Yes.
22 Q. If we go to the second page of 1046, do the
23 photographs reflect -- reflected here represent
24 tremolite that your laboratory took from the tremolite
25 standard of the National Institute of Standards and

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1 Technology?
2 A. Yes. Those are two asbestos tremolite
3 structures on the left-hand side, and on the right-hand
4 side is the corresponding chemistry for the --
5 essentially the pattern that tremolite has for the one
6 on the very -- the very tall one is silicon and then --
7 Q. This right here?
8 A. Yes.
9 And then magnesium and then calcium.
10 Q. This?
11 A. And then sometimes a little iron to the further
12 on the right.
13 Then that really big peak all the way to the
14 right is copper, because it's on a copper grid.
15 Q. That's the grid itself?
16 A. Correct.
17 Q. And you said iron. Is this a little iron peak
18 there?
19 A. Yeah. Sometimes it's there, sometimes it's
20 not.
21 Q. And this right here, that I put my -- that's
22 the calcium?
23 A. Correct.
24 Q. And is that calcium distinguish tremolite from
25 anthophyllite or talc?

1 A. It does.

2 Q. If you had no calcium there and you had this

3 pattern, would that be consistent with anthophyllite?

4 A. It would be -- yes. It would be close to

5 anthophyllite or fibrous talc.

6 Q. And is fibrous talc and anthophyllite

7 chemistry, the chemistry of it, substantially similar?

8 A. It is.

9 Q. And by the way, the photographs that we're

10 seeing here on this NIST standard, is this a -- a

11 fiber?

12 A. No. The -- both those, in my opinion, based on

13 the photographs, are bundles of fibers.

14 Q. And what is it about the photograph, the

15 appearance, that represents it as a bundle of fibers?

16 A. Well, it's kind of hard to see from this far

17 back, but on the bottom right-hand end, you'll see what

18 looks like almost little protrusions sticking out of

19 the bottom. If you can then see this under the

20 microscope, you can see the striations that these are

21 individual fibers all packed together. And that's the

22 definition of a bundle: parallel fibers that are

23 touching, not spread apart.

24 And the top one the same thing. This one's a

25 little different in that you can see one, two, three,

1 four, five, six, a number of individual fibers, and you

2 have one long one on the top right-hand side.

3 So these would be two bundles of tremolite

4 asbestos.

5 Q. And then the last page, on the NIST standard,

6 does it show the diffraction pattern or the selected

7 area electron diffraction image?

8 A. Yes.

9 Q. And we heard from Mr. Poye about this the other

10 day. But can you just remind us again. What are we

11 seeing in here and how do we know this is an amphibole

12 or asbestos based upon this diffraction pattern?

13 A. Well, nobody -- at least we don't -- just base

14 something on a diffraction pattern. We look at three

15 things: The morphology. Is it fibrous? Does it meet

16 the definition? Very important, the microchemistry.

17 Does it have a tremolite chemistry, the right ratios of

18 magnesium, the calcium, and the one tall silicon peak?

19 And does it have an amphibole-type d-spacing -- that's

20 the -- that's the distance between the row of atoms --

21 that are consistent with tremolite?

22 So it's not just one thing. Everything goes

23 through a series of diagnostic tests. You know, A,

24 yes. It has the right morphology. It's fibrous.

25 Check.

1 Second, the chemistry. Does the chemistry

2 match? And tremolite is very distinct. Check.

3 Does it have an amphibole diffraction spacing

4 between the atoms that are in the range of what you

5 would expect for tremolite which are off standard x-ray

6 cards for x-ray diffraction? Check.

7 And there it is.

8 You can't -- you just can't rely on one thing.

9 You put it all together and it says, yes, by all the

10 standards, this is tremolite asbestos.

11 Q. Now, if somebody were to say, Dr. Longo, wait a

12 second, you didn't measure the space and do what's

13 called a zone-axis measurement of this, so how can you

14 possibly know that's an amphibole pattern, because you

15 didn't measure it? Is that a fair criticism, in your

16 view?

17 A. Absolutely not.

18 Q. And why -- why do you say that?

19 A. You don't need a zone-axis diffraction pattern.

20 If all's you had was a diffraction pattern and no

21 chemistry to go along with it, then, yes, you need to

22 do at least one zone-axis diffraction, and you have --

23 and that's how microscopists would have done it in the

24 '70s and early '80s before EDXA or the microchemistry

25 got so good, for lack of a better word. So you don't

1 need that. It's not required in any of the standard

2 protocols to do that.

3 Q. Did George Yamate, years ago, 30 years ago,

4 suggest zone-axis measurements?

5 A. George Yamate said for EPA Level 3, and if it's

6 going to be a -- if it's going to be a legal case, you

7 need to do zone -- you need to do a couple zone-axis

8 diffraction patterns to verify.

9 Q. Now, I'm going to switch gears back to -- away

10 from the standard to the -- your testing, actually.

11 Do you -- do you employ the methods for the

12 identification of asbestos that have been recognized,

13 the International Standard Organization methods, the

14 other methods, for the proper identification of

15 asbestos?

16 A. Yes.

17 Q. And have -- did you employ -- you and your lab

18 employed those clearly-defined methods in the

19 identification, in the characterization of asbestos in

20 talc?

21 A. Yes, we did.

22 Q. Anywhere, in any of the methods that you

23 examined for the identification of asbestos in talc, is

24 there a requirement that you do what's called a, quote,

25 backscatter analysis?

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1 A. No.
2 Q. If somebody were to come to this courtroom and
3 say, I'm state of the art, I use backscatter analysis
4 and I can determine there's no asbestos here because
5 the backscatter analysis that I use, is that in any
6 method whatsoever for the identification of asbestos?
7 A. No. That would not be, in my opinion, a -- a
8 method used to identify different types of asbestos.
9 That was not -- backscatter detectors and transmission
10 electron microscopes were never designed to do
11 irregular surfaces like asbestos fibers. It has to
12 be -- we did it in graduate school. It has to be a
13 polished surface so you can see all the different
14 orientations of the crystal. If it's round like
15 asbestos fiber or bundle, it is very difficult to
16 identify without numerous standards, and that's even in
17 the published papers about that.
18 So it's not recognized in any -- any agency as
19 a method for the identification of asbestos.
20 Q. So let's -- let's jump right into the -- these
21 books. You have binders over -- box -- two boxes of
22 binders next to you, do you not, Doctor?
23 A. Yes, sir.
24 Q. And within the -- the binders -- and these are
25 already admitted into evidence.

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1 Just so the record is clear, I'm going to start
2 with the box that's got the J&J -- the box that J&J
3 tested.
4 A. Okay.
5 Q. Okay? And let's start --
6 By the way, did you and your laboratory look at
7 historical samples provided by J&J at J&J's lab over
8 the last several months, in the last year or so?
9 A. Probably the last year, yes.
10 Q. Let's take a step back before we get to these
11 real quick.
12 Originally a couple years ago, did you -- did I
13 provide you samples that I got from collectors -- from
14 one collector, and did other lawyers provide you
15 samples to look at that got -- purchased from eBay and
16 purchased -- or got from individual clients that had
17 claims, and did you analyze a whole bunch of J&J
18 products a couple years ago?
19 A. Yes.
20 THE COURT: Do you want to ask just one
21 question at a time.
22 MR. SATTERLEY: I'm sorry. I apologize,
23 Your Honor.
24 THE COURT: Go ahead. Just start over.
25 I don't know which one he answered there, but

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1 go ahead.
2 THE WITNESS: Yes, yes, yes, and yes.
3 BY MR. SATTERLEY:
4 Q. Let me break it down.
5 A couple years ago, did I provide you three
6 samples?
7 A. Yes.
8 Q. Did I provide an affidavit from a collector?
9 A. Yes.
10 Q. Did you analyze those three samples that I
11 provided to you a couple years ago?
12 A. Yes.
13 Q. Did other attorneys from other law firms
14 provide you samples?
15 A. Yes.
16 Q. Did you -- some of those samples -- were some
17 of those samples that you understood were obtained off
18 eBay?
19 A. That is correct.
20 Q. And were -- some of those samples, did you
21 understand were obtained from individual clients that
22 had a claim against J&J?
23 A. Yes.
24 Q. Okay. And did you analyze all those samples in
25 2017, the fall of 2017?

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1 A. Yes.
2 Q. And did you issue a written report with
3 photographs and -- and come to opinions and conclusions
4 about those -- those specific samples?
5 A. Yes.
6 Q. And were you examined by J&J lawyers in detail
7 about those samples?
8 A. A number of times.
9 Q. Okay. Did you do what's called a particle size
10 distribution to verify the particle size of the talc
11 and things in the samples?
12 A. Yes.
13 Q. All right. Did you -- subsequent to all that
14 work, the three samples I provided you, the eBay, the
15 clients, did we provide you samples that we got
16 directly from J&J?
17 A. Yes, sir.
18 Q. Okay. And before we got the samples from J&J,
19 directly from J&J, did J&J lawyers cross-examine you
20 and criticize you with regards to the samples that you
21 had off eBay?
22 A. Yes.
23 Q. Okay. Did they accuse of maybe -- or suggest
24 that the lawyers contaminated the samples?
25 A. Yes.

1 Q. Did they suggest maybe the samples were
2 contaminated in some -- by some other third party?
3 MR. CALFO: Your Honor, this is improper
4 direct.
5 THE COURT: May I see counsel at sidebar.
6 MR. SATTERLEY: In the interests of time, I'll
7 move on.
8 THE COURT: All right.
9 MR. SATTERLEY: Okay.
10 BY MR. SATTERLEY:
11 Q. Subsequent to -- to -- in the original analysis
12 you did, did you report, in your opinion, accurate
13 findings of all the asbestos you -- you found?
14 A. Yes, sir.
15 Q. And did you take photographs of them?
16 A. Yes.
17 Q. And did you take EDS of them?
18 A. We did.
19 Q. And did you take selected area electron
20 diffraction?
21 A. Yes, sir.
22 Q. All the backup data?
23 A. Yes.
24 Q. Okay. Now, subsequent to all that, did you
25 obtain directly from me or lawyers representing

1 individuals samples J&J provided from their historical
2 collection?
3 A. Yes, sir.
4 Q. Okay. And what we have in these binders -- do
5 you have in the binders results from some of the
6 historical samples that you've analyzed?
7 A. Yes, sir.
8 Q. And as a matter of fact, did Johnson & Johnson
9 also provide photographs and dates, if we go to the
10 1960s, the historical samples from the 1960s? This is
11 Exhibit 1080 in evidence.
12 So, for example, this one is a photograph of
13 one of the historical samples that your lab and
14 laboratory analyzed; correct?
15 A. Correct.
16 Q. And the way it worked was -- and you correct me
17 if I am wrong, but you -- your lab got just a very
18 small portion of each of the samples so that another
19 laboratory, a laboratory hired by Johnson & Johnson
20 lawyers, could look at those as well; correct?
21 A. That is correct.
22 Q. All right. And included in Exhibit 1080, do
23 you have -- you have photographs of your findings,
24 including photographs of PLM, TEM, and so forth?
25 A. Yes. Yes, that's correct.

1 Q. And do you have also the -- the EDS, the
2 chemistry, for example, the chemistry of what you
3 found?
4 A. Correct.
5 Q. Okay. And do you have the selected area
6 electron --
7 A. Yes.
8 Q. And so in the binder, Number 1080, are there
9 the identification -- photographs of the identification
10 of asbestos and fibrous talc in this binder?
11 A. Yes. The results are the photographs for both
12 the transmission electron microscopy as well as the
13 polarized light microscopy for positive samples,
14 typically using the Blount method for PLM.
15 Q. And many of the photographs, do they also --
16 the samples, have the date of the sample, according to
17 J&J? This was 1966 or '67, according to what they
18 provided to us?
19 A. Yes, sir.
20 Q. And let me just go through the record real
21 quick so that we have the record real clear.
22 The 1970s -- is that 1081 historical samples --
23 the photographs of the historical samples from the
24 1970s?
25 A. Yes.

1 Q. And did your lab and laboratory break the
2 samples down by sample numbers and have an M number,
3 M -- like, for example, M69042, is that a sample --
4 sample number that your lab analyzed?
5 A. Yeah. This would be our sample tracking
6 numbers, where -- when we log samples in, we go ahead
7 and give it a sample tracking number so that we can
8 keep track of it.
9 Q. And I'm going to come back to the '70s in a
10 little bit.
11 In the 1980s, did -- all the photographs of
12 asbestos that you found in the 1980s, is it
13 Exhibit 1082?
14 A. Yes, it is.
15 Q. And does it have -- are these true and accurate
16 photo- -- photographs of the -- of the asbestos
17 anthophyllite, tremolite, actinolite that you found --
18 you and your laboratory found in the Johnson's Baby
19 Powder in the 1980s?
20 A. Yes, sir.
21 Q. In the 1990s -- Exhibit 1083, does it have
22 photographs of nine different samples in the 1990s
23 where asbestos is identified, documented in -- in this
24 in this binder?
25 A. Yes, sir.

1 Q. And in the 2000s -- and this is going to be --
 2 the 2000s, this is going to be Exhibit 1084. Are there
 3 five different samples where photographs were taken
 4 regarding the presence of tremolite and asbestos in the
 5 2000s?
 6 A. Yes.
 7 Q. And did you -- have you also prepared and
 8 provided to Johnson & Johnson a report on Chinese talc,
 9 where you analyzed Chinese talc for the presence of
 10 asbestos?
 11 A. Yes, sir.
 12 Q. And did you document asbestos from the Chinese
 13 talc from Johnson's Baby Powder?
 14 A. Yes.
 15 Q. And the last binder is 1065. This is a
 16 verification of Lee Poye's TEM analysis of J&J
 17 historical Vermont Shower sample -- Shower to Shower
 18 samples. And did you take photographs and verify the
 19 presence of asbestos from Lee Poye's analysis?
 20 A. Yes, we did.
 21 Q. And he was here the other day, and he testified
 22 that you and your lab verified 98 percent of asbestos
 23 that he found in the Shower to Shower.
 24 A. That is correct.
 25 Q. Now, obviously, I'm not going to go through all

1 these pictures today. There are literally -- there's a
 2 heck of a lot. So -- but I -- what I do want to do is
 3 have you explain some things to us.
 4 A. All right.
 5 Q. And, for example, if you could go to the 19- --
 6 Before I go to the 1960s, some of the samples
 7 that you looked at, at the request of me and the other
 8 lawyers, in 2017, were those samples going back into
 9 the '50s and the '40s and the '30s, very old samples?
 10 A. Yes, sir.
 11 Q. Okay. And did -- did you document the asbestos
 12 and take photographs of asbestos in those very old
 13 samples?
 14 A. I did.
 15 Q. Okay. Now, the '60s -- if you could go to the
 16 binders that's the '60s. And let's just pick out so we
 17 can explain what PLM -- if you could tell me a tab
 18 number that would explain what -- what PLM photographs
 19 look like so we can talk about what you found.
 20 A. Let's just go to Tab -- pick one here -- Tab 3.
 21 Q. Tab 3. Okay. And we have page numbers at the
 22 bottom.
 23 A. That would be page 41.
 24 Q. All right. So tell you what. I'm going to
 25 take it out of the binder, make it easier for you.

1 There you go. It's hard to see because of the light.
 2 MR. SATTERLEY: Your Honor, may I turn the
 3 light off? Maybe -- I don't know if the reflection
 4 will -- the front light here?
 5 THE COURT: I don't think that's a reflection.
 6 MR. SATTERLEY: Not going to work?
 7 THE CLERK: I think it's the reflection from
 8 the...
 9 MR. SATTERLEY: It might be here, on...
 10 Oh, there we go. That -- that helps out right
 11 there. That helps out.
 12 BY MR. SATTERLEY:
 13 Q. Dr. Longo, what are we looking at?
 14 A. This is a photomicrograph using polarized light
 15 microscopy. And in this particular case, for this
 16 sample here, the analyst identified this as
 17 actinolite/tremolite.
 18 Now, this is known as dispersion staining,
 19 which is part of what happens in polarized light
 20 microscopy. There is actually no staining involved.
 21 It's just a matter of changing the characteristics of
 22 the optical microscope, cutting the light down and
 23 changing the F-stop.
 24 And so what we're looking at is light being
 25 refracted around the bundle under dispersion staining.

1 And because of the color of that light being refracted
 2 around the fiber under -- under polarized light, it
 3 gives you a certain color.
 4 And that color there, you would say is sort of
 5 yellowish-golden, and it's parallel to the light, so
 6 that the light is coming in one direction, parallel to
 7 it. And when it refracts around the bundle, it will
 8 refract in this light -- in this -- they call it a
 9 vibration, but it's actually the wavelength of light.
 10 And the analyst will say, "Okay. That is a
 11 goldish -- that is a yellowish-gold," and has a chart
 12 that they look up and say, "Okay. At this color, it's
 13 going to be this refractive indices," meaning 1.62 or
 14 1.61.
 15 And then he'll -- go to the next one. He'll go
 16 to the perpendicular direction.
 17 Q. The next slide?
 18 A. The next slide.
 19 Q. All right. So -- so this -- before --
 20 A. That's -- you're putting a purple one on there.
 21 That's not the next side. Turn it up --
 22 Q. Oh, this way. Double-sided.
 23 A. Turn -- turn the one you have upside down.
 24 Q. Oh. All right.
 25 A. Now, that is that -- that is the exact same

1 bundle. He's now rotated it so the light is going
2 through at a different direction, and you'll get a
3 darker reddish color there. And then he can do the
4 refractive indices, and say, "This is in the range of
5 actinolite/tremolite."

6 These analysts that I have -- this particular
7 person has been doing this for almost 30 years. He's a
8 geologist, trained at McCrone, or Walter McCrone's
9 group, back 30 years ago to do this. All our analysts
10 were trained by Walter McCrone many, many, many years
11 ago, because that's what they -- what he did, and this
12 is how -- the protocol.

13 So they look at this, and then they have some
14 other stuff that they do. Extinction angle. If you
15 keep turning it to some point, the light refracted
16 through the material will be the same as the light
17 around the material on a particular angle. So it
18 disappears. And when it disappears, they call it the
19 extinction angle.

20 And so tremolite and actinolite, if you turn it
21 slightly oblique, start going this way, it just fades
22 out. They'll go, "Okay. That's indicative of
23 tremolite/actinolite."

24 Then the refractive indices -- and then they --
25 and everybody likes the next one because it's such a

1 pretty color. It's called elongation. Now you can put
2 the purple up.

3 Q. Before I get the purple one out, let me just
4 ask a couple questions.

5 It says, "actinolite/tremolite." You -- and
6 you described this as bundles.

7 A. Yeah. Go back to the previous one.

8 Q. Well, I mean, why -- why can't -- why can't
9 this just be a cleavage fragment? This is a cleavage
10 fragment, Dr. Longo, isn't it?

11 A. No. No, it's not.

12 Q. Why not?

13 A. If you -- you can't quite see it from there.
14 If you look at it, you can see striations in the bundle
15 itself. I don't know if you can -- you actually see
16 lines going through it. It's hard to see on this one.
17 We'll get a better -- just because you're blowing it
18 up.

19 So it's difficult to see here, just because
20 you're blowing it up, but it actually has striations
21 going through it that make up this.

22 And it's large. This is 88.5 micrometers in
23 length. If you want to know the aspect ratio, you
24 don't measure the whole bundle. The protocol tells you
25 to measure the individual fibers.

1 And I know it's hard to see it. We might have
2 a better example, because it's bigger than this one.

3 So the aspect ratios on here are all running
4 about -- in this particular one between 160- and
5 200-to-1 aspect ratio. This is a bundle. This is not
6 a cleavage fragment.

7 And it's meeting the counting protocols for
8 aspect ratios greater than 5 to 1, individual fibers,
9 and, therefore, is a regulated asbestos bundle.

10 Q. The purple one that you -- this page 43 --

11 A. This is called elongation. When you turn it in
12 this direction -- you have to put another filter in
13 there. It's a 530-nanometer filter that, again,
14 changes the vibration of the light, gives you these
15 beautiful colors.

16 But it tells you how fast the light goes
17 through the crystal via the orientation, either this
18 way or that way. And if you switch it the other way,
19 it changes colors, and these particular colors will
20 tell you what type of asbestos this is.

21 So it's a very involved analysis.

22 Q. And is it your opinion that this is --

23 Let's zoom it back out.

24 -- tremolite?

25 A. Well, it's actinolite/tremolite. We don't

1 differentiate between actinolite and tremolite. You
2 have to --

3 Q. Under PLM?

4 A. Under PLM, because you have to go to another
5 RI, refractive indices, fluid.

6 And since both of those are regulated asbestos,
7 tremolite and/or actinolite, and actinolite is part of
8 the whole solid solution series of tremolite --
9 meaning, eons ago, when it all formed, what -- if there
10 was a little bit more iron present, you could get more
11 on the actinolite side; if there's less iron, you get
12 more on the tremolite side.

13 Since it's regulated, we don't go the extra
14 step.

15 Q. So on this particular one, this has got
16 M68503-009; right?

17 A. Right. And it has -- you can see the "BL" on
18 there. That means that was the Blount -- this is a
19 Blount PLM.

20 Q. You used the Blount method?

21 A. Yes, sir.

22 Q. Under the -- the same number, M68503-009, we
23 have a TEM photograph. That's going to be on page 50
24 of this exhibit. And explain what this represents.

25 A. This is a tremolite -- it's either a fiber or a

1 bundle. I would have to be sitting at the microscope
2 so I could adjust the focal plane and go in higher
3 magnification to tell you if it was either a fiber or a
4 bundle.

5 But it -- either way, it's still a regulated
6 asbestos structure, meeting the counting rules. In --
7 in this particular case, it's tremolite.

8 Q. And do you include with this in your report --
9 it's part of exhibit -- the exhibit here, the chemistry
10 and the selected area electron diffraction?

11 A. Yes.

12 Q. And throughout these binders, you do that with
13 regards to the photographs, provide for the TEM, the
14 selected area electron diffraction and EDS?

15 A. Yes.

16 Q. If we go to Tab 4, I want to ask you about
17 page 59 and 60. And page 59 has the pretty purple with
18 the blue. There is an arrow right here, and it says
19 "actinolite/tremolite elongation."

20 A. Yes.

21 Q. Is this another example of asbestos fibers
22 documented by the PLM method?

23 A. Yes. And if you go to page 57, it's that same
24 asbestos bundle. And you can see the striations a
25 little bit easier on page 57.

1 Q. 57?

2 A. You just had it in your hand.

3 Q. This one right here?

4 A. Yes. I don't know if you can see it -- my
5 glasses are -- need a new prescription -- but if you
6 look at that closely on the ends you can actually see
7 individual fibers on each end of that bundle.

8 Q. Oh, I see. It's a different magnification,
9 then; right?

10 A. That's at a hundred times. There you go.

11 Now, see on the very -- on each end, you can
12 see what looks like little fibers protruding out of
13 that, that's a classic bundle.

14 Q. I got it upside down.

15 A. Now that you have turned it right side up, it's
16 still a bundle.

17 Q. It's still a bundle.

18 A. So that's almost 70 micrometers long, and if
19 you take one of those little fibers in there for the
20 width, because that's how you determine the aspect
21 ratio on the PLM, you easily have something that's
22 200 to 1 or greater for your aspect ratio in that.

23 And interesting, TEM, even though we have
24 positive TEM samples for this same thing, you never see
25 these large bundles. Every microscopist in the country

1 understands that TEM is biased against these very large
2 bundles. And we don't know why. It gets caught up in
3 the sample prep, because everything you see is smaller
4 than that in TEM. Even though TEM is more sensitive.

5 So there is room for both analysis here, the
6 large stuff and the smaller asbestos stuff, using these
7 two different techniques.

8 Q. Did you find asbestos in samples -- in many of
9 the samples from the '70s as well?

10 A. Yes, sir.

11 Q. And what about the '80s?

12 A. Yes, sir.

13 Q. And what about the '90s?

14 A. Yes.

15 Q. And let's go up to the binder that's listed as
16 the '80s. Exhibit 1082.

17 And, once again, the photographs with the
18 numbers are on there; correct?

19 A. That is correct.

20 Q. So, for example, this one right here, we look
21 and zoom in, it says "1985" on it, I think, on the
22 bottle -- the actual bottle itself. J&J BPC1985;
23 right?

24 A. That is correct.

25 Q. If you could, just in the '80s, give us a

1 representative sample -- well, let me -- let me pick
2 one out because I don't know what I'm looking at here.

3 Let's look at Tab 2, page 14. It's upside down
4 again. Oh, now it's upside down. I don't know how to
5 use this thing.

6 Anyway, Dr. Longo, what's represented here?

7 A. This is another tremolite/actinolite bundle,
8 and this is again under elongation, so it's measuring
9 the speed of the light through the -- essentially the
10 crystalline fiber.

11 This is at a magnification of 200 times, and
12 it's showing you some of the striations of the
13 individual fibers that you can see if you go back to
14 page 13, which would be the other side of what you
15 have.

16 And this is under dispersion staining. And it
17 shows you under a hundred X that -- and, again,
18 dispersion staining one goes around the bundle, so you
19 see more what's happening on the edges. It again shows
20 individual fibers.

21 And this is a bundle that's 64 micrometers --
22 63.4 micrometers in length. So these are all large
23 bundles that we're finding by the Blount PLM method.

24 Q. And if we flip over to page 16, I see that this
25 is marked anthophyllite on part of the structure -- or

1 part of the bundle and talc on another part of the
2 bundle. Explain that.
3 A. Well, it's either a transitional but more
4 likely what we're looking at here is the anthophyllite
5 bundling on a particle of talc, because the
6 anthophyllite is all the way from one end to the other.
7 When you have these transitional anthophyllite talc
8 fibers, you'll see that it's almost growing, looks like
9 one is growing inside the other. But here we have it
10 on the edge, and what we have next to it looks like a
11 talc -- under a talc plate. So we see this sometimes
12 where you have an asbestos fiber sitting on or under a
13 talc plate.
14 Q. And then, if we go over to 17, page 17, we have
15 talc and anthophyllite right next to each other.
16 Bundles of both; correct?
17 A. It's either bundles or a small plate. And
18 here's one of the ways you can tell the difference
19 between asbestos and talc. The very thick portion of
20 the talc plate, the colors aren't similar, and then
21 between where we have the talc in the anthophyllite
22 bundle, it's almost a darkish bluish color, and that
23 tells you that is not anthophyllite.
24 So we -- and then we have that one bundle
25 anthophyllite. And, again, I believe it's laying on

1 top of the talc particle.
2 Q. Then we go to page 19. We have anthophyllite
3 bundle crossed polar. What's that mean?
4 A. The optical -- the polarized light microscope
5 has two polarizing lens, one on the bottom and one on
6 the top. And polarized light is like polarized
7 sunglasses. It causes -- the light is scattering
8 everywhere and it grabs the light and that only is
9 going in one direction. That's why you don't get the
10 glare and stuff when you used polarized light
11 microscopes. You can -- if you fish, you can see the
12 fish better.
13 Now, if you got two of them, you can change the
14 direction pretty drastically and get another direction
15 in there. So in crossed polars, we have the polars
16 turned crossways to each other. And so now we're
17 seeing just the anthophyllite portion where the arrow
18 is. Everything else you see there that we are looking
19 at that talc plate is talc. And you can see that is
20 definitely a different color. And you can also see
21 some of the individual striations there.
22 Q. And do you include in the photographs, the TEM
23 photographs from the same sample? For example, Tab 2,
24 does it have both TEM photographs as well as
25 PLM photographs?

1 A. Yes, sir.
2 Q. In the interests of time, I'm not going to go
3 through every decade or every -- but are there
4 confirmed photographic evidence of asbestos in the
5 '60s, '70s, '80s, '90s, and 2000s?
6 A. Yes, sir.
7 Q. Any question in your mind regarding that?
8 A. No, none whatsoever.
9 Q. Have you confirmed, in your opinion, what has
10 been documented in the documentary evidence of what we
11 went over earlier about Johnson & Johnson Baby Powder?
12 MR. CALFO: Objection, no foundation. Calls
13 for speculation on the part of this witness.
14 THE COURT: That's overruled.
15 THE WITNESS: I'm sorry. Could you repeat it.
16 BY MR. SATTERLEY:
17 Q. Yeah. Have you, in your opinion, confirmed and
18 taken photographs of the presence of asbestos in
19 Johnson & Johnson Baby Powder that were -- was
20 documented in the documents we went over this morning?
21 A. Yes.
22 Q. Back in -- historical?
23 A. Yes. We -- finding the same thing.
24 Q. With regards to -- we don't have your reports
25 in here, just the photographs, but do you have the

1 reports, your reports, with you?
2 A. Yes, sir, I do.
3 Q. And, with regards to the Johnson & Johnson Baby
4 Powder, the -- what percentage of positives did you
5 find, meaning what percentage had asbestos in them?
6 A. For the 72 samples, what I call historical,
7 57 containers and 15 railroad car samples, we had an
8 overall total positive of approximately 68 percent of
9 the 72 we analyzed.
10 Q. So does that mean, Dr. Longo, that if 68
11 percent was positive, that means 30 -- was 32 percent
12 there's no asbestos there, in any of those bottles?
13 A. No. Doesn't mean that.
14 Q. Well, why not? Why not?
15 A. It means --
16 MR. CALFO: Objection, Your Honor. This calls
17 for speculation. There's no asbestos.
18 THE COURT: That's overruled.
19 THE WITNESS: Well, it's just below your
20 detection limit. So at some point all's you can say
21 is, it's below our detection limit, we can't verify if
22 it's there, and we can't verify. And nobody can ever
23 say, it's pure and it's not there, because you can't
24 get to that low of detection limit. All's you can say
25 is nondetect. We can't verify it's there or not there.

1 BY MR. SATTERLEY:
 2 Q. How many fibers would have to be there in order
 3 for you to even detect it in the method that you're
 4 using?
 5 A. Right now we have our detection limit that we
 6 used here, and I'm just going to scan through the
 7 report real quick. We've gotten our detection limit
 8 down for these analysis to 3,000 asbestos fibers or
 9 bundles per gram of talc. So we have to have at least
 10 that many there, in one sample. Then most of them are
 11 5 and 6,000 fibers or bundles of asbestos per gram.
 12 So think of it as this: If my detection limit
 13 is 6,000, that means I have to find -- for me to find
 14 one fiber, it has to be at least 6,000 fibers and
 15 bundles per gram of cosmetic talc to find one. Because
 16 it's spread out through there.
 17 Q. And have you -- have you done the calculation
 18 with regard to the 7024 with regards to how many
 19 asbestos fibers would need to be there per gram under
 20 their method?
 21 A. Approximately 14 million for one fiber to be
 22 there using --
 23 Q. For one fiber?
 24 A. To be using that method.
 25 Q. But wait a second. Their -- their method says

1 they have as many as 20 or 5 fibers of any -- of each
 2 variety; right?
 3 A. Correct.
 4 Q. So you're saying 14 million for one fiber, so
 5 how many asbestos fibers could be present under the
 6 7024 method and still qualify as nonquantifiable?
 7 A. It works out to be about 6' -- well, you take
 8 four fibers, it's around 58 million before you -- you'd
 9 have to have one more fiber to get that fifth fiber
 10 before you would say, yes, it has asbestos in it.
 11 If you only had four tremolites, that would
 12 work out to a little bit over 50 million asbestos
 13 fibers or bundle per gram to find one, because the
 14 detection limit is so bad in that protocol.
 15 Q. And if you had -- had to find four or five of
 16 the same of each variety, so you could have -- you
 17 could have four tremolite, four anthophyllite, four
 18 actinolite, and four chrysotile and still call it
 19 nonquantifiable, what number are we talking about
 20 asbestos fibers present and still be able to say it's
 21 nonquantifiable?
 22 A. A little bit over 200 million fibers and
 23 bundles per gram.
 24 Q. I apologize.
 25 All right. Now let me switch gears and talk

1 with you about Colgate, Colgate testing. And Cashmere
 2 Bouquet. Last year, at the request of other attorneys,
 3 did you analyze 3 -- or did you analyze 38 samples of
 4 Cashmere Bouquet?
 5 A. Yes.
 6 Q. And did you take photographs and document what
 7 your laboratory found in tab, what's called Appendix A,
 8 Appendix B, and Appendix C?
 9 A. Correct.
 10 Q. And we marked as Appendix A -- it's into
 11 evidence, I should say, as 1091, photographs from
 12 Appendix A.
 13 And what does that represent?
 14 A. Appendix A is the samples that we received from
 15 the law firm of Simon Greenstone.
 16 Q. And did you document a photograph of the
 17 containers, photograph of the analysis? Did you
 18 photograph what was identified?
 19 A. Yes, sir. But to be fair, to be included in
 20 that, we videotaped the opening up of the seal,
 21 Cashmere Bouquet face powder samples that we got.
 22 Q. These were sealed?
 23 A. Not all of them. But 20 out of these 25 were
 24 sealed with the manufacturer's sort of a paper-type
 25 covering over than the entire area. Underneath it

1 would be the talcum powder. Sort of a -- they're round
 2 and they were all still sealed.
 3 Q. Now, I want to -- I'm not going to go through
 4 all the photographs in Appendix A, but I want to go
 5 through a few of them just so that we can understand
 6 what they represent. And I'm just going to randomly
 7 pick. If you go to sample, under Tab 12, which is
 8 M68072. If you go to -- it's page 220.
 9 A. Okay.
 10 Q. What are we seeing here in the Cashmere
 11 Bouquet, one of the samples?
 12 A. I'm sorry. What page are you on?
 13 Q. 220. It's got a number, M68072.
 14 A. That is a -- it looks like -- if I were to pick
 15 that -- let me see if I can find it. All right. Hold
 16 on. That would be a tremolite/actinolite bundle for
 17 001003. Oh, I'm sorry. We're on -- I'm on the wrong
 18 one. You said 220; right?
 19 Q. Yeah. 220.
 20 A. That would be Number 4 out of that sample.
 21 That is a crushed tremolite/actinolite bundle. When I
 22 say "crushed," looking at it, it looks like, because
 23 this material is milled, meaning it's all ground up to
 24 make a certain size, it looks like that was pushed down
 25 and caused that bundle to spread apart instead of

1 saying that's three bundles.
2 So that's a tremolite/actinolite. Very large
3 bundle.
4 Q. And if we flip over to this, what does this
5 represent? This is page 219. Immediately pre --
6 A. This is under crossed polars, and this one is a
7 really good example on how you can see some of the
8 individual fibers that are consistent with what a
9 bundle should be. And they're all going in the same
10 direction, and you can see these individual fibers that
11 make up this bundle. At these magnifications this
12 bundle is approximately about 200 to 250 micrometers in
13 length.
14 So think of it as on a TEM grid. I don't know
15 if Lee Poye showed what TEM grids look like, but this
16 would cover two TEM grids -- openings.
17 Q. And let's see. And just so if we can get a --
18 if you can flip to Tab 3. You document a photograph,
19 the container, this is the Cashmere Bouquet face powder
20 in the way it came to you?
21 A. Yes. This was another sealed container, which
22 we videoed when we opened them to have it documented
23 that it was sealed.
24 Q. If you flip over to page 71 of this same
25 sample, it says "elongation," and it's got that pink,

1 and it's got a blue -- once again, what does that
2 represent?
3 A. That's most likely a talc fiber. It's not
4 asbestos. No asbestos was found for the PLM in this
5 particular sample. Only the TEM.
6 Q. So, in this particular sample, we go over to
7 the TEM, was tremolite asbestos found in this Cashmere
8 Bouquet product?
9 A. Yes.
10 Q. Is that a photograph -- this is page 76 there,
11 sir.
12 A. Yes. That's a photograph of an asbestos
13 tremolite structure.
14 Q. And do you include in this the chemistry and
15 SAED?
16 A. Yeah. If you go to the very next page,
17 page 77, you can see the chemistry -- the magnesium,
18 the silicon, and the calcium peak -- which, if you
19 remember, looks identical to the NIST standard,
20 National Institutes of Science and Technology. What
21 they say is tremolite asbestos. So it's a perfect
22 match.
23 Q. Well, let me -- why isn't that a cleavage
24 fragment, Dr. Longo? Why isn't that just a cleavage
25 fragment and not asbestos?

1 A. Well, by all the counting rules in TEM, this is
2 regulated asbestos. It has the appropriate chemistry,
3 appropriate diffraction pattern for the d-spacings. It
4 has the appropriate morphology greater than -- greater
5 than or equal to 5 micrometers in length. This is
6 3.8 micrometers in length. Has to have an aspect ratio
7 of at least 5 to 1 or greater. It matches that. And
8 in this particular case, again, it's on -- just looking
9 at the results here, that would be -- and, again, I
10 would have to be sitting at the microscope to change
11 the focus, but it looks very close to being a bundle
12 just on this two-dimensional plane because of the back
13 end of it has those little bumps. Let's see what the
14 microscopist said.
15 Q. Are you talking about down here, the box down
16 here?
17 A. The microscopist called it a fiber. And that
18 would be the best position because you can change the
19 focal plane.
20 Q. Is it difficult sometimes where there's a
21 photograph like this on calling something a fiber
22 versus a bundle when it's a close call?
23 A. Yes and no. It's difficult if you're just
24 looking at a two-dimensional photograph sitting here,
25 because you're not sitting at the microscope. If

1 you're at the microscope and that is your -- and you
2 even said you got to distinguish fibers and bundles,
3 it's a lot easier because you can change the focal
4 plane, you can change the contrast, and the microscope
5 has a little gizmo you can flip in and increase the
6 magnification by ten times. So --
7 Q. "Gizmo," is that a technical term?
8 A. It is. If you ever worked in a lab, you'd call
9 it a "gizmo."
10 Q. So --
11 A. It's actually binoculars that you can put in
12 and open up a -- open up a small screen so you can
13 focus in on it.
14 Q. In the Cashmere Bouquet, of the 38 samples --
15 and this is just A. We've got B, Appendix B. Is that
16 another -- this 1092, and that is photographic evidence
17 of the samples and the results and the asbestos that
18 was identified; correct?
19 A. Yes, sir.
20 Q. And was this sent to you by -- these five
21 samples sent to you by a different law firm?
22 A. Levy Konigsberg in New York.
23 Q. And then Appendix C, was this -- this is
24 Exhibit 1093 -- these eight additional Cashmere Bouquet
25 products that you analyzed, your laboratory analyzed,

1 took photographs of for the presence of asbestos?
 2 **A. That is correct.**
 3 **Q.** And is there a total of 38 that's a part of
 4 this report from last fall?
 5 **A. Yes, sir.**
 6 **Q.** And of the 38 samples -- this is going to be
 7 Appendix C of the 38 samples -- how many did you find
 8 asbestos in?
 9 **A. 30 of 38.**
 10 **Q.** On Appendix C, 1093, the last one, Tab 8, does
 11 that include Cashmere Bouquet, it came in this
 12 container?
 13 **A. Yes, sir.**
 14 **Q.** And this is page 337 of the photographs here.
 15 Is that tremolite asbestos, sir?
 16 **A. 337?**
 17 **Q.** Yes, sir.
 18 **A. I'm sorry. What appendix?**
 19 **Q.** Appendix C.
 20 **A. Oh.**
 21 **Q.** September of 2018. Page --
 22 **A. Yes, that's tremolite there. All the way to**
 23 **the back.**
 24 **Q.** The very last sample.
 25 **A. Yes. That would be a tremolite structure that**

1 is laying on top of the -- one of the TEM grids. You
 2 can see on the left-hand side how you have the little
 3 right angle area, dark?
 4 **Q.** Right here?
 5 **A. Yes.**
 6 **Q.** This is -- this is the grid -- the edge of the
 7 grid here?
 8 **A. Correct. So that structure is laying on --**
 9 **over the grid.**
 10 **Q.** Is -- so this is described as 4.2 microns in
 11 length and 0.4 microns in diameter.
 12 Is the fact that it's -- the grid -- it's going
 13 underneath the grid, I guess?
 14 **A. Over the grid.**
 15 **Q.** Over the grid?
 16 **A. Yes.**
 17 **Q.** Does that mean that it could be much longer
 18 than that, you just can't tell?
 19 **A. That's correct. You could only -- the rules**
 20 **only allow you to measure the length from where the**
 21 **grid ends and the fiber or bundle starts.**
 22 **Q.** And does the chemistry and the diffraction
 23 pattern match up with regards to the rules, all the
 24 methods, in calling this asbestos?
 25 **A. Yes, it does.**

1 **Q.** Now, if somebody were to come into this
 2 courtroom and sa, no, no, no, Dr. Longo has got it
 3 wrong, that's a cleavage fragment, under the -- under
 4 the rules of identifying asbestos set forth by these
 5 various methods you've been telling us about, would
 6 that be -- would that be accurate?
 7 **A. No. It has very specific regulated --**
 8 **health-regulated rules, and this is what you have to**
 9 **count. You have to follow the protocol. If you use a**
 10 **certain type of protocol -- and these are in all the**
 11 **protocols for these rules for TEM -- you have to follow**
 12 **them.**
 13 **Q.** Now I'm going to switch and go to the
 14 20 samples that I requested to your analyst, Zach, go
 15 and pick up from RJ Lee, J&J and Colgate's experts.
 16 **A. Okay.**
 17 **Q.** The actual quantity of samples was more than
 18 20; correct?
 19 **A. Yes.**
 20 **Q.** At the time of your report in this case, had
 21 your laboratory analyzed 20 of those samples?
 22 **A. Yes.**
 23 **Q.** And have we marked the chain of custody for
 24 those as 1096?
 25 **A. I'm looking for them.**

1 **Q.** It's a -- the skinny binder.
 2 **A. Yes. Thank you.**
 3 **Q.** And if we look at the first three, just the
 4 photographs -- this is going to be on page 11 -- we see
 5 what the container looks like for the first three;
 6 right?
 7 **A. Yes.**
 8 **Q.** And they're dated according to what RJ Lee and
 9 Colgate has provided to you; correct? The '70, '70,
 10 '73 to '77?
 11 **A. Yes.**
 12 **Q.** And if we look at the next three, did you --
 13 did you and your laboratory just pick the first 20?
 14 **A. Yes.**
 15 **Q.** And was there problems with a couple of those
 16 so you had to extend to 22?
 17 **A. There was.**
 18 **Q.** And tell us what the problem was.
 19 **A. They were in methanol. They weren't --**
 20 **Q.** What's --
 21 **A. They weren't in a powder. The sample bottles**
 22 **had alcohol in them, methanol, which is a form of**
 23 **alcohol, mixed with it, so we didn't want to analyze**
 24 **those since they weren't starting with just the talcum**
 25 **powder. It's different, you know, the protocol, so we**

1 just extended it to 22 and did not analyze the ones in
2 methanol.
3 Q. So the -- into evidence the jury can take a
4 look at the photographs of the various containers of
5 the Cashmere Bouquet that goes along with the chain of
6 custody; correct?
7 A. Correct. Now, we didn't receive the
8 containers; we just received samples from the
9 containers.
10 Q. RJ Lee, the laboratory for Colgate, was the one
11 you guys had to actually go to Pittsburgh, Zach had to
12 go to Pittsburgh, to pick these up?
13 A. Yes, sir.
14 Q. In Appendix B do you have the results of the --
15 PLM results for these Colgate -- these Colgate samples?
16 A. Yes, sir.
17 Q. And I have Appendix B having 15 different --
18 excuse me -- 17 different samples. Was there 16 or 17
19 that was positive by PLM?
20 A. Let me get the report, because I don't want
21 to -- for these 20 samples just to make sure.
22 THE COURT: While he's looking for that,
23 Mr. Satterley, you referred to this as "Appendix B."
24 What -- what is the --
25 MR. SATTERLEY: To his report.

1 THE COURT: What is the exhibit number?
2 MR. SATTERLEY: Oh, I apologize. 1097.
3 THE COURT: All right. So that's -- that's
4 1097?
5 MR. SATTERLEY: Yes, Your Honor. 1097.
6 BY MR. SATTERLEY:
7 Q. And, Dr. Longo, let me see if I can help you
8 out with regards to -- the first -- if we go to Tab 1,
9 the first group of photographs relate to a talc bundle.
10 A. Yeah. The first set of photographs, there was
11 16 positives by PLM --
12 Q. Okay.
13 A. -- and this one was not one of them --
14 Q. Okay.
15 A. -- the very first one.
16 Q. So -- and we'll get to the TEM in a little bit.
17 So 16 of the 20 by PLM had asbestos in them, in
18 your opinion?
19 A. Yes, sir.
20 Q. And did you document that and photograph it and
21 produce it as a report so Colgate could take a look at
22 that?
23 A. Yes, sir, I did.
24 Q. And -- and once -- since I've got this up here,
25 this is page 4 of 1097. How do you know that's a talc

1 fiber bundle?
2 A. Well, that's -- that's in elongation, but if
3 you go to -- if you go to page 2 --
4 Q. Oh, page 2.
5 A. Now, these samples had lots of other stuff in
6 it, but if you look where that is, where the talc fiber
7 is, you'll notice that from the other ones we looked at
8 and were more yellowish-gold than in this particular
9 case, in parallel, parallel dispersion, dispersion
10 staining, alls you get is this new blue color, this
11 nice bluish color.
12 That tells you it is -- it is talc for these
13 types of samples, as well as the other information that
14 we gleaned from the crystalline analysis by polarized
15 light microscopy.
16 Q. Dr. Longo, has J&J counsel in the past accused
17 you of misidentifying things as asbestos?
18 A. Yes, sir.
19 Q. Okay. Well, why didn't you just identify this
20 as asbestos and say, "This is asbestos," instead of
21 talc?
22 A. Because it's not. That wouldn't be right.
23 MR. CALFO: Your Honor, I object. Vague and
24 ambiguous as to "this." Is it a photograph?
25 MR. SATTERLEY: Yeah, the photograph. That's

1 what we're talking about.
2 MR. CALFO: I thought that was Colgate.
3 BY MR. SATTERLEY:
4 Q. Whether it's Colgate or Johnson & Johnson --
5 THE COURT: Well, it's --
6 BY MR. SATTERLEY:
7 Q. -- my question is --
8 THE COURT: It's 18 minutes of 3:00. We are
9 going to take our afternoon recess and come back in 15
10 minutes.
11 Ladies and gentlemen of the jury, it is your
12 duty as jurors not to converse amongst yourselves or
13 with anyone else on any subject connected with the
14 trial or to form or express any opinion thereon until
15 the matter is submitted to you.
16 I'll see you back in 15 minutes.
17 (Whereupon, the following proceedings were held
18 outside the presence of the jury:)
19 THE COURT: All right. It appears that all of
20 the jurors have departed from the courtroom.
21 Is there anything we need to put on the record
22 before we go on break?
23 MR. SATTERLEY: Your Honor, the only thing is
24 that I understand Your Honor made rulings sometime
25 today with regard to certain documents. We would just

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1 like to incorporate those documents into evidence
2 regarding -- some J&J documents.
3 And then at some point, we need to address the
4 few remaining objections to the Scala exhibits. And I
5 don't know if Your Honor wants to do it at the end of
6 the day or tomorrow morning or whenever Your Honor --
7 THE COURT: I'm happy to do it at the end of
8 the day. We'll send the jury home at 4:30.
9 MR. SATTERLEY: That's fine, Your Honor.
10 THE COURT: Okay. Anything else?
11 We are in recess.
12 MR. SATTERLEY: Yes, Your Honor.
13 MR. GARY SHARP: Thank you, Your Honor.
14 (Recess taken.)
15 (Whereupon, the jury having entered the
16 courtroom, the following proceedings were held:)
17 THE COURT: Okay. The record reflects that all
18 the jurors are present in their appointed seats,
19 counsel are at counsel table, and we're ready to
20 proceed.
21 Go ahead, Mr. Satterley.
22 MR. SATTERLEY: Thank you, Your Honor.
23 BY MR. SATTERLEY:
24 Q. We were talking about Cashmere Bouquet and
25 specifically about 1097, the PLM results, and I was

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1 asking specifically about some of the photographs.
2 If we can go to the very first -- or the second
3 sample, I'm going to ask you about this. We have
4 anthophyllite and then a talc plate here and then talc
5 at the other end?
6 A. Yes, sir.
7 Q. Explain that.
8 A. Well, that's called the intergrowth or
9 transitional. So you have anthophyllite as well as
10 talc. So when it was formed, you get two different
11 minerals, essentially, on one fiber, or bundle here in
12 this case.
13 Q. I saw that in this -- these pictures, to me --
14 and you can correct me if I am wrong -- there appears
15 to be several photographs. Is this a photograph of the
16 same structure that we just looked at?
17 A. Yes, sir. It's under crossed polars, and it's
18 at a magnification -- a higher magnification of 200 --
19 400 times. The other one was 100.
20 And this just shows the -- so this is at 400
21 under crossed polars, and you can see that it has fiber
22 structures that go all the way through. So it's known
23 as an intergrowth. So it's -- it's not only
24 anthophyllite, but it has some fibrous talc associated
25 with it.

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1 Q. Is this, the next page, page 11, the same fiber
2 that is being analyzed with -- it's got a different
3 color background. Is that the same?
4 A. Yes, sir. This has no filters. It's not under
5 dispersion staining. It's not an image in that
6 530-nanometer plate. It's just under crossed --
7 crossed polars.
8 So you're seeing the talc plate that it's
9 laying on. And this may be, in fact, actually other
10 asbestos fibers laying on top of it, but it's too small
11 for us to resolve and -- and adequately identify on
12 that plate. It has anthophyllite on one end and talc
13 on the other.
14 Q. And the reason why I asked this question is,
15 we, or maybe the jury, when they look through these
16 photographs when they're evaluating this case -- there
17 would be several photographs that appear to be the same
18 structure but different colors and different
19 backgrounds. That's just different ways in which
20 you're looking at it under the microscope?
21 A. Yes, different wavelengths, a lot of which will
22 give you different colors. Some of them -- and you
23 have to just remember to take a look at what the
24 magnifications are. Same fiber, but it's bigger, it's
25 typically at a higher magnification. So smaller ones

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1 are anywhere from 100 to 200, and then you'll also have
2 up to 400.
3 Q. And then this one, for example, this one is on
4 page 12. It looks like it's -- it's going this
5 direction, and this one, it's going this direction. Is
6 that the same situation, it's perpendicular?
7 A. Yes. It's on a stage that you can rotate. So
8 here, we have parallel dispersion, and then here, we
9 have perpendicular dispersion. And since you're
10 changing it, the fiber -- or bundle here, to the
11 direction of the light under dispersion staining, the
12 vibrations that come through change and give you
13 different -- these different colors that then they can
14 then match to the refractive indices, which then will
15 put it in either tremolite, actinolite, anthophyllite,
16 or if there was some other type of asbestos present.
17 Q. The Colgate lawyer wanted me to point that you
18 had gone to another sample, M69934. This is yet
19 another sample with asbestos in it; correct?
20 A. Yes, sir.
21 Q. And I wanted to ask about this. It says,
22 "Elongation at 400 magnification, tremolite."
23 Is this asbestos, Dr. Longo?
24 A. Yes, sir. You're -- we're looking at, again,
25 the exact same structure, higher magnification, under a

1 different type of filter, giving you this color.
 2 Q. And do we have, once again, over here, page --
 3 two pages over, page 31, exact same structure?
 4 A. Oh, you -- you've moved on me.
 5 Q. I'm sorry. Page --
 6 A. Now we're on -- now we're on Sample 5.
 7 Q. Yeah. Sorry.
 8 Page 29 and page 30 and page 31, are those all
 9 the -- of Exhibit 1097, all the same structure under
 10 the microscope?
 11 THE COURT: Well, before -- let him answer the
 12 question over again as posed. He was still on the last
 13 sample.
 14 MR. SATTERLEY: I apologize, Your Honor.
 15 THE COURT: Because I'm confused. And I
 16 don't -- and maybe nobody else is, but I'm confused.
 17 So what -- so what is that?
 18 THE WITNESS: That's actinolite/tremolite. But
 19 let's just start from the beginning of this one so
 20 people can look at it and -- and understand what
 21 it's -- what's going on.
 22 So this is -- and we're starting on page --
 23 BY MR. SATTERLEY:
 24 Q. 22?
 25 A. -- 20 -- 22 now. Now, you've gone to something

1 different.
 2 Q. I'm sorry. I was moving too fast.
 3 All right. Do you want to go to a different
 4 one?
 5 A. Let's start from the beginning. So move it up
 6 so we can see the -- see the numbers underneath, the
 7 actual title of this. Just move the whole thing
 8 straight up.
 9 Okay. There you go.
 10 That identifies what we found in this
 11 particular case, going from right to left at the
 12 bottom. This was done by the International Standards
 13 Organization, polarized light microscopy. No heavy
 14 liquid density separation was done. The sample number
 15 is M69934-005ISO, and this would be the first structure
 16 found under this method.
 17 So now we're starting. So this is under
 18 dispersion staining, and you can see we have a lot of
 19 stuff in here. And then over to the upper right, you
 20 see the actinolite/tremolite bundle, and it's
 21 32.6 micrometers long.
 22 And we're in parallel dispersion. That's
 23 the -- usually the first thing up on the particular
 24 sample.
 25 Now, if you go to the next page, page 23,

1 that's the perpendicular under dispersion staining.
 2 You can see the change in color which is consistent for
 3 tremolite/actinolite at these wavelengths.
 4 Q. And now.
 5 A. And now we're getting to the elongation. Now
 6 it's at 400 times. So it's been to this, you know,
 7 north -- sort of the northeast direction. And that
 8 matches the colors it ought to be. And then under
 9 crossed polars --
 10 Q. Can we go to the next page, 25?
 11 A. Well, you go to 25. We're still on this one
 12 structure, because we're going through all the
 13 different analytical procedures for identifying it.
 14 Here we have it under crossed polars. And then the
 15 very next one is the last one you would have with
 16 crossed polars out. Now you're just looking at it
 17 under the light. And you can see the individual
 18 striations in there. The polarizers are out. And this
 19 is regulated asbestos. It's going to be approximately
 20 33 microns long, and those individual fibers in there
 21 would give you aspect ratios of over a hundred to one,
 22 closer to 200 to 1. So it meets all the regulations
 23 that -- for these PLM analysis. For this.
 24 Q. Let's keep going through this Tab 4 just so we
 25 can talk through -- a complete through one sample so we

1 know what we're looking at.
 2 A. So if you go to the very next sample, the very
 3 next page where you have that 88.6. Now, pull it up so
 4 you can see the bottom. This would be the second
 5 structure that we're finding under the ISO method. So
 6 you see the 0002? And, again, under parallel
 7 dispersion. In this case you have more of the golden
 8 yellow. And then the next page would give you the
 9 perpendicular dispersion. Not that page.
 10 Page Number 28.
 11 Q. Go back.
 12 A. It's hard to see in this lighting. And then we
 13 would go on. Actinolite, tremolite -- the next one
 14 would be the elongation, page 29.
 15 Q. The pink or purple, is that always going to be
 16 the elongation?
 17 A. Yes. It's got the right colors at the right
 18 direction under the polarizers and under the -- under
 19 the 530-nanometer plate.
 20 Then the next one is crossed polars.
 21 Q. Now, this is page 30 of Exhibit 1097; is that
 22 correct?
 23 A. Correct.
 24 Then the very next one is this same structure
 25 again without crossed polars.

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1 Q. Is there any question in your mind, Dr. Longo,
2 that this is regulated asbestos in the Cashmere Bouquet
3 product?
4 A. No, sir.
5 Now, just for completion, let's go to the very
6 next page, page 32. Now, here is the exact same sample
7 under the Blount method.
8 THE COURT: That's not the next page.
9 THE WITNESS: It should be. Page 32?
10 MR. SATTERLEY: Yes, Your Honor.
11 THE COURT: Well, it's a different sample on
12 the left.
13 THE WITNESS: Yes, sir, it is, but it's just an
14 example of the -- now the Blount PLM with the same
15 sample.
16 BY MR. SATTERLEY:
17 Q. Because BL, is that the -- right there. Does
18 that mean the Blount method as opposed to an ISO
19 method?
20 A. Correct.
21 THE COURT: Then the 002 and the 001 are
22 different.
23 THE WITNESS: Yes, sir. This is 005.
24 Now, one of the things you'll notice, it
25 seems -- even though it has some big particles in

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1 there, there's not as much clutter around. It has
2 removed -- and this is -- a lot of this is not talc,
3 this is other ingredients there are in the -- in the
4 Cashmere Bouquet. You can see, even though you have
5 these big particles, it's not all this small, cluttered
6 stuff around, so it shows you how the talc is removed
7 and cleans the sample up.
8 BY MR. SATTERLEY:
9 Q. And the magnification level is different also.
10 It's a hundred magnification as opposed to what you
11 were talking about earlier was 400?
12 A. No. All the dispersion staining is typically a
13 hundred.
14 Q. Oh, okay.
15 A. 400 would be elongation. And if you go to the
16 very next page, page 34.
17 Q. I see. Let me stop there so I can clear my
18 confusion.
19 So when see something that's a hundred, if the
20 shape looks different, it's because it's a different
21 magnification, like a hundred to 400?
22 A. Correct.
23 Q. Okay. All right. Now we're on page -- am I on
24 the right page here, page 33?
25 A. That's 33. So now we're in perpendicular --

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1 parallel. But if you go to the very next page --
2 because this is a good example of a very fibrous
3 bundle.
4 Q. No, wait a second. Let me -- no. This one
5 says perpendicular --
6 A. Perpendicular. If you go to page 34.
7 Q. Okay. I see. I see.
8 A. In this particular one, you can absolutely see
9 the single fibers in the elongation, as well as the
10 next pages, so this is a very good example of a very
11 fibrous bundle.
12 Q. So what we're seeing here on page 34 is a
13 close-up -- closer up view of what we were looking at
14 on page 33, 32, 31; correct?
15 A. That is correct. It's -- we were looking at
16 100. This is now 400.
17 Q. And there we got page 35. Is that yet
18 another -- the crossed polar of the asbestos in the
19 Cashmere Bouquet product?
20 A. Yes, sir. The same structure. It just shows
21 you a little bit more detail of the fibers.
22 And then the -- without the polarizers -- and,
23 again, you can -- you can see the individual fibers.
24 And so on.
25 Q. And it goes -- you have a whole bunch of

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1 photographs that just demonstrate -- do you have a
2 whole bunch of photographs that demonstrate the
3 presence of asbestos in the Cashmere Bouquet product?
4 A. Yes, sir.
5 Q. There's one other term that you used. If we
6 flip over to Tab 10 to the elongation, page 159.
7 Is this Tab 10 yet another asbestos bundle in
8 a Cashmere Bouquet product?
9 A. Yes, sir.
10 Q. And page 160 -- actually, 161. "Aperture
11 diagram partially closed." What's that mean?
12 A. Diaphragm.
13 So that the aperture, which lets the light
14 through, is slightly closed to increase the -- increase
15 the contrast so that you can resolve these individual
16 fibers in the bundles better. It's just a -- it's an
17 optical microscopist's technique for changing the
18 contrast. Instead of hitting a darker button, it can
19 change the light and get you a better contrast.
20 Q. Based upon the PLM results, Dr. Longo, are you
21 of the opinion that there's asbestos in Cashmere
22 Bouquet talcum powder?
23 MR. MULARCZYK: Objection. Vague.
24 THE WITNESS: Yes, sir.
25 THE COURT: I'm going to overrule that. You

1 can inquire on cross-examination.
2 THE WITNESS: Yes, sir, for the samples that we
3 tested.
4 BY MR. SATTERLEY:
5 Q. Well, the four of them by PLM you didn't find
6 asbestos.
7 A. By PLM we did not.
8 Q. What about by TEM?
9 A. Yes, sir. The other four were positive because
10 we're looking at two different types of structures, and
11 so we only analyze those four by TEM. Since the Blount
12 PLM and the ISO PLM were positive, the negative ones we
13 checked to see if the TEM, which is more sensitive,
14 could determine if it was present or not.
15 Q. And Exhibit 1098, the folder, does that
16 represent photographs of some of the TEM results from
17 the Cashmere Bouquet product?
18 A. Yes, sir.
19 Q. And if we go to -- and did you find asbestos in
20 all four of the negatives by PLM?
21 A. Yes, sir, we did.
22 Q. And the second -- that Tab 2, page 9 of
23 Exhibit 1098, what does this represent?
24 A. This is a tremolite bundle, and these are one
25 of these even with the photograph you don't have any

1 doubt telling that's a bundle. You can see one, two,
2 three, four, five, six -- I can see six individual
3 fibers there. Some of those were -- where you've
4 circled actually have two -- two or three pushed
5 together, and, actually, you have one that almost has a
6 splayed end, which you normally do not see on TEM
7 because of the size.
8 Q. And splayed ends, is that a classic
9 identification of a bundle?
10 A. No. It's more of a classic identification of
11 commercial asbestos that's been added to bulk samples.
12 Very rarely do you see splayed bundles in TEM at all
13 because of the size you're looking at. It's the bulk
14 samples.
15 Q. I apologize. I should have asked the question
16 this way: The fact that this is -- these have splayed
17 ends and they're a bundle, does that indicate to you
18 that this is asbestos?
19 A. No. It tells us it's asbestos by meets all the
20 counting definitions, has the right chemistry, has the
21 right diffraction pattern. This is regulated tremolite
22 asbestos. But if you just -- as being interested in
23 this, this is what you would normally see in a product
24 where the asbestos has been added at very high
25 concentrations. It's very rare to see a splayed bundle

1 of tremolite in these talcum powders because tremolite
2 is brittle. So when they mill it, it grinds up. So
3 it's just interesting to see.
4 Q. And in this, you have -- you have -- do you
5 have the chemistry -- the calcium, magnesium, the
6 silica?
7 A. Correct. You have the -- again, it's almost a
8 fingerprint. It's a ratio of magnesium to silica to
9 calcium, all based on the height of the calcium peak.
10 Q. And do you have the diffraction pattern, the
11 SAED, that meets all the requirements that this is
12 asbestos?
13 A. Yes, sir.
14 Q. Now, back on this photograph, I just want to
15 ask, this part right here, is part of the film on the
16 grid torn there?
17 A. It's torn and gone. That's -- that's a carbon
18 film that is put on to the sample, the filter before we
19 dissolve the filter away.
20 That carbon film is actually only about 10 to
21 20 nanometers thick, about 15 to 20 atoms thick, so
22 it's very fragile. And the way it's done is, the
23 sample is collected on a filter. That filter is then
24 coated with carbon, and then a small piece of that
25 filter is put on the TEM grid and then put on filter

1 paper that's soaked with chloroform, and it slowly
2 dissolves away the filter and just leaves a replica of
3 the filter.
4 See all those little holes? Those are all the
5 pores that are in the filter that made a replica of
6 what you're seeing.
7 Q. And the fact that the film is partially gone
8 there, does that in any way detract from the fact that
9 this is a regulated asbestos bundle of tremolite?
10 A. Oh, no. It's -- it's not uncommon to see torn
11 films from just putting it in and out of the microscope
12 because you're going under pressure changes, because
13 it's so fragile.
14 Q. The same tab, Tab 2, what is depicted here, the
15 photograph on page 12?
16 A. Page 12 is another tremolite asbestos. I
17 believe if I was -- I think you can call this a bundle,
18 and it's either laying on top or underneath a talc
19 plate. That thing in the middle.
20 Q. This thing right here?
21 A. Yes, sir.
22 Q. And the chemistry, does the chemistry match up
23 to be a regulated tremolite?
24 A. Yes, sir, it does.
25 Q. And once again, the selected area electron

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1 diffraction, does it match up?
2 A. It does.
3 Q. We have another one here on this sample. And
4 what does this represent?
5 A. This represents talc, fibrous talc.
6 Q. And is it labeled as talc there?
7 A. That's correct. This is not asbestos. This is
8 fibrous talc in the sample.
9 Q. And does it have the chemistry of talc?
10 A. Yes.
11 Q. And does it have the diffraction pattern of
12 talc?
13 A. Yes.
14 Q. So I'm not going to go through all these
15 photographs of all the asbestos in the TEM, but is
16 there any question in your mind, Dr. Longo, that
17 there's asbestos documented by TEM in the Cashmere
18 Bouquet samples that you received from the RJ Lee
19 Group?
20 A. No, there's no doubt.
21 Q. And has it been documented and photographed and
22 produced to the defendants, the lawyers for Colgate?
23 A. Yes, sir.
24 Q. Now, if somebody were to say to this jury that
25 you've never written a letter about or written a report

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1 regarding the presence of asbestos in J&J products,
2 would that be true?
3 A. I've written reports. I'm not sure who I'm
4 supposed to send the letter to.
5 Q. Have you issued those reports and produced them
6 and produced them to J&J and been examined by J&J's
7 lawyers on many occasions?
8 A. Yes, sir.
9 Q. Now I want to switch gears and talk about
10 Patricia Schmitz.
11 Do you have your written, signed report that
12 you issued back in March of this year?
13 A. Yes, sir, I do.
14 Q. Does it outline many of the items that you
15 reviewed, including her deposition?
16 A. Her six volumes of deposition, yes.
17 Q. And did you review the testimony of her
18 sisters?
19 A. Yeah. Joni and Susan. I also reviewed that.
20 So eight depositions. Or actually nine.
21 Q. By the way, I should have asked this question
22 earlier: What does it mean if you find one fiber
23 bundle by TEM? How many fibers is that per gram?
24 A. Depending on the detection limit, either one
25 fiber or one bundle can run anywhere from 6,000 to

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1 9,000 individual fibers in bundles per gram.
2 Q. And how does that equate in terms of how many
3 fibers per bottle?
4 A. Well, if you have a 9-ounce bottle, every ounce
5 is 28.4 grams, I believe, and if you have nine of
6 those, multiple that 28.4 by 9 by 9,000 fibers.
7 Q. Tell the folks on the jury what you did with
8 regards to your evaluation of Mrs. Schmitz' exposure to
9 asbestos from her talcum powder usage and being near
10 her family members when the product was being used?
11 A. I read all her depositions, as well as her
12 sisters' depositions, and then went through and said,
13 okay, well, she stated that, you know, when her sisters
14 were young and with her mother for three months, that
15 she would be there once a day for both sisters when the
16 sisters got bathed, and the mother would use Johnson
17 Baby Powder. And she said she was standing right
18 there. So that would be -- every day for those three
19 months would be two exposures, or two applications.
20 You know, and then -- and I'm going on to be --
21 you know, two times two and a half weeks after that for
22 1.7 years with the sisters, then diapering the sisters,
23 which she helped her mother. So I added up all those
24 applications.
25 And I tried to be conservative because she

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1 would say things like diapering, you know, three to
2 four times per week. I would put 2.5 times per week
3 just for the times being missed, and that sort of
4 thing.
5 So when her mother applied the Johnson Baby
6 Powder to herself, she would be standing there. So I
7 added that up.
8 And so at the end of the day, I could get 2,199
9 Johnson Baby Powder applications.
10 Q. Those 2,199, was that relating solely to 1957
11 to 1967?
12 A. Yes, sir.
13 Q. Did you likewise evaluate the total number of
14 Johnson's Baby Powder applications relating to Vermont
15 talc source from '68 to 2003?
16 A. And that's a good point. I broke it down into
17 the different mines. So the '57 to '67, Johnson &
18 Johnson was using their -- their Italy source for talc.
19 And then I broke it down from 1968 to 2003, which was
20 the Vermont talc source that Johnson & Johnson was
21 using.
22 And for the -- for 1968 to 2003, when Patricia
23 was 10 years old in '68 until she was 13 in 1971,
24 testified that she used Johnson Baby Powder three to
25 four times a week for her personal bathing. So three

1 to four times a week, using three and a half times a
2 week times the three years that she did that, '68
3 to '71, was 825 applications.

4 Then she testified that she was present and
5 assisted when her mother was incapacitated because of a
6 bad shoulder, that she would bathe her two to four
7 times a week from 1998 to 2' -- approximately four
8 times a week from 1998 to 2005. So I said three times
9 a week times 52 weeks times five years.

10 Q. And you have a total of 1,605 applications?

11 A. Correct.

12 Q. Let me stop you right there. I would like for
13 you to assume -- well, nowhere in her deposition or her
14 sisters' deposition was there any discussion or
15 questions about her father having Alzheimer's; correct?

16 A. That is correct.

17 Q. About caring for him in the hospital bed in
18 their house in their dining room; correct?

19 A. No, sir. That never came out in the testimony.

20 Q. So if there was -- I'd like for you to assume
21 that there's additional testimony that Patricia Schmitz
22 helped take care of her father for roughly ten years,
23 the last ten years of his life, and utilized Johnson's
24 Baby Powder during those ten years, you haven't taken
25 that -- you haven't added that into this calculation;

1 correct?

2 A. No, not at all. That was -- that information
3 was never brought out in any of the depositions.

4 Q. So that would be on top of the calculations
5 that you've already made here in this report; correct?

6 A. Yes.

7 Q. And there would be additional exposure that
8 would be additive of the exposure assessment you have
9 in Mrs. Schmitz' case?

10 A. That is correct.

11 Q. With regard to the Chinese-sourced talc, how
12 many applications in -- to Chinese-sourced talc?

13 A. 312. From -- again from 2004 to 2005, three
14 times a week, when her mother needed help again.

15 Q. And then Cashmere Bouquet, did you do a similar
16 type of calculation with regards to her testimony
17 regarding her use of Cashmere Bouquet?

18 A. Yes, sir, I did.

19 Q. And what -- how many total applications of
20 Cashmere Bouquet did she have according to her
21 testimony?

22 A. According to her testimony, she used it from
23 1970 to 2005. And that she probably -- and she stated
24 that she used almost every day after bathing, she
25 stated she probably did not use Cashmere Bouquet

1 20 percent of those days. So not every day during that
2 time.

3 So daily minus 20 percent is 392 (sic) days of
4 use instead of 365, times 35 years.

5 Q. And what's the total application of Cashmere
6 Bouquet?

7 A. That works out to 10,220 applications.

8 Q. Did you also consider Avon and her -- the fact
9 that she used Avon product?

10 A. Yes, sir, I did.

11 Q. And what's the total application from 1980 to
12 2005 regarding her use of Avon?

13 A. 3,250 applications of Avon talcum powder.

14 Q. So what opinions have you developed based
15 upon -- and -- and what calculations have you developed
16 based upon her exposure, the description she has of
17 exposure, your knowledge of -- of this product with
18 regards to, first, Johnson & Johnson?

19 A. Well, the first opinion in -- for each of
20 these, that she would have had significant exposure to
21 cosmetic talcum powder from these three different
22 manufacturers: Johnson & Johnson, Colgate-Palmolive --
23 Cashmere Bouquet -- and Avon.

24 The second opinion is -- based on our testing,
25 based on historical documents, based on the percentages

1 that we find positive, it's my opinion that more likely
2 than not, when she used any of these products --

3 MR. CALFO: Your Honor, I object to this. He's
4 not an expert in statistics.

5 THE COURT: It's overruled.

6 You can answer that question.

7 THE WITNESS: Thank you, Your Honor.

8 -- that she would have had a significant
9 exposure to airborne asbestos -- and it's
10 interesting -- significantly over background, even
11 though there is no background of tremolite/
12 anthophyllite in the natural environment, unless there
13 is a source.

14 So you can use the IARC number of 1.0 times
15 10 to the minus 5 fibers per cc --

16 BY MR. SATTERLEY:

17 Q. You went too fast for me. 10 to the minus --
18 10 to the minus 5 --

19 A. 0 -- 0.0000.

20 Q. How many --

21 A. Five zeros. A .1 followed by four -- excuse
22 me. Four zeros and a .1. I did that backwards.

23 Q. Four zeros and a -- a 1?

24 A. And a 1.

25 Q. And that's the IARC background number?

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1 A. Yes.

2 Q. Okay. And using that IARC back- -- background

3 number, based upon everything you know of Patricia

4 Schmitz, based upon everything you know of the

5 historical testing, based upon everything you know of

6 the scientific literature, did she have significant

7 exposures above background to asbestos from Johnson's

8 Baby Powder?

9 A. Yes.

10 Q. Did she have significant exposure above

11 background to Cashmere -- to asbestos from Cashmere

12 Bouquet --

13 A. Yes.

14 Q. -- talc?

15 MR. MULARCZYK: Objection. Foundation.

16 THE COURT: It's overruled.

17 BY MR. SATTERLEY:

18 Q. Go ahead.

19 A. Yes.

20 Q. And -- and -- and is it -- in terms of exposure

21 to asbestos, is it important to you that these products

22 were intended to be shaken out into the air?

23 A. Yes.

24 Q. And why is that important?

25 A. Because these products are designed to be --

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1 not intentionally, but the way they're designed and

2 milled and ground and used, these particles become very

3 airborne very easily. You're not starting with an

4 asbestos product that you have to grind, sand, or do

5 something to get exposure.

6 This is just merely shaking a very fine powder

7 out that gets airborne very easily and stays airborne

8 very easily because of the sizes of those microscopic

9 particles. Excuse me.

10 So the way it's designed, you're shaking out a

11 very fine powder that causes exposure because it gets

12 airborne very easily. And with those accessory

13 minerals, such as tremolite or anthophyllite asbestos,

14 in there, that's what causes the exposure.

15 Q. And is that -- would it be fair to say this

16 product is not -- the asbestos in this product is not

17 encapsulated?

18 A. No, there is no encapsulation involved here.

19 It's just a mixture of cosmetic- or pharmaceutical-

20 grade talcum powder with trace amounts of --

21 potentially trace amounts of amphibole asbestos that we

22 can detect using these protocols we're using.

23 Q. Now, one other concept I want to talk with you

24 about in terms of exposure is a concept called

25 re-entrainment. What is re-entrainment?

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1 A. It's an industrial hygiene word, and it's

2 really just a fancy word for getting the dust off the

3 surface and getting it back up into the air.

4 You know, it's like taking a rug out and

5 beating on it. And that dust that's gotten into that

6 throw rug over time will start coming out, and you can

7 see it, or sweeping up dust, where, if it's the right

8 lighting, you can see the dust that's moving as well as

9 what's getting up in the air.

10 So you're disturbing what's happened before,

11 that's now on a surface, and you're disturbing it again

12 by either sweeping or wiping or sometimes even walking

13 through it, because your foot going down causes

14 pressure for it to come up.

15 So it is redistributing asbestos dust that has

16 been put onto a surface after use.

17 Q. And do you have an opinion, Dr. Longo,

18 whether -- I would like for you to assume the testimony

19 will be that occasionally her sisters and herself would

20 clean up the baby powder or the Cashmere Bouquet after

21 they -- they applied it to their body or to their

22 family members.

23 And the cleaning up process, does that result

24 in additional exposures?

25 MR. MULARCZYK: Objection. Foundation.

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1 THE COURT: Overruled.

2 THE WITNESS: Yes. In my opinion, it does.

3 BY MR. SATTERLEY:

4 Q. And by the way, Dr. Longo, you weren't in --

5 in -- at their house on Bay -- Bay Street over in

6 Alameda at any point in time; correct?

7 A. I was not.

8 Q. And -- and nobody -- you have not seen anybody

9 measure the level of dust that they were exposed to

10 from any -- any powder product; correct?

11 A. That is correct.

12 Q. You've not seen any instruction or direction

13 from any company saying, "Hey, you better measure the

14 amount of dust you're breathing in" at any point in

15 time, have you?

16 A. I have not.

17 Q. Now, in addition to your analysis, have you

18 relied upon published papers, where published papers

19 talk about --

20 Are you familiar with the Gordon paper in 2014?

21 A. I am.

22 Q. And have you relied upon the Gordon paper?

23 A. I have.

24 Q. And does the Gordon paper have information

25 regarding exposure and exposure that occurs with

1 regards to Cashmere Bouquet product?

2 **A. That paper was all -- was all about exposure**

3 **from using Cashmere Bouquet products.**

4 **Q.** And it was -- was that paper specifically

5 studying exposures to cosmetic talc products in terms

6 of what an individual may have?

7 **A. Yes.**

8 **Q.** And have you also read the Anderson paper,

9 Elizabeth Anderson, with a company called Exponent?

10 **A. I have.**

11 **Q.** And have you looked at the underlying data from

12 that paper with regards to the Cashmere Bouquet product

13 and whether or not it has asbestos in it?

14 **A. I have.**

15 **Q.** And based upon your analysis of that published

16 paper, the Anderson paper, and the underlying data,

17 does the underlying data support the fact that there's

18 asbestos in the Cashmere Bouquet product?

19 **A. Not the way the paper is written, no.**

20 **Q.** Well, what do you mean?

21 **A. Well, it says that it's all cleavage frag;**

22 **there is no asbestos there.**

23 **Q.** Okay. And the paper itself says it's all

24 cleavage fragments?

25 **A. That's what I recall, yes, that -- in my**

1 **opinion, it's redefined what asbestos is.**

2 **Q.** And have you had, in part of your reliance

3 materials, the underlying data from the lab in Hayward

4 to the Anderson paper?

5 **A. Yes, sir.**

6 **Q.** And does the underlying data demonstrate

7 anthophyllite asbestos being present in the Cashmere

8 Bouquet product?

9 **A. Yes, sir, it does.**

10 **Q.** And in your reliance materials, do you also

11 rely upon, with regard to Cashmere Bouquet, J&J

12 documentation from a -- from a Mr. Rolle in 1976

13 regarding finding of anthophyllite in Cashmere Bouquet?

14 **A. Yes, sir, I do.**

15 **Q.** And do you also rely upon J&J internal document

16 from I.W. Sloan, dated March 31, 1976, finding

17 anthophyllite in the Cashmere Bouquet product?

18 **A. Yes, sir, I do.**

19 **Q.** And do you also -- have you also read and

20 reviewed the Colorado School of Mines 1973 analysis of

21 Cashmere Bouquet Sample Number 9 regarding the presence

22 of asbestos?

23 **A. Yes, sir.**

24 **Q.** So based upon everything that you've analyzed,

25 is there any question in your mind, Dr. Longo, that

1 there's asbestos historically found in Cashmere

2 Bouquet?

3 **A. No, sir, there's not.**

4 **Q.** Any question in your mind that asbestos's

5 historically found in Johnson & Johnson Baby Powder?

6 **A. No, there's no question in my mind.**

7 **Q.** Now, me and my law firm, Ms. Clancy's law firm,

8 are paying you for your time here today; correct?

9 **A. Yes, sir. My company will send a bill.**

10 **Q.** And MAS, what is -- what do they -- the hourly

11 rate for your time?

12 **A. I charge \$550 an hour, no matter what I do,**

13 **either in litigation or out of litigation.**

14 **Q.** And do you consult with and -- and testify at

15 the request of defendants in litigation?

16 **A. Yes, sir, I do. But to be fair, actual**

17 **testimony, deposition and trials, is primarily for**

18 **plaintiffs, like 95 percent of the time.**

19 **Q.** And does your -- my -- your hourly rate, does

20 that change whether or not you're hired by a company to

21 assist in litigation or whether they're hired by

22 Ms. Schmitz or somebody like me?

23 **A. No. It's the same price for either side.**

24 **Q.** J&J's -- the lawyers said that you've changed

25 your methodology regarding analysis of talc.

1 Have you done that?

2 **A. No.**

3 **Q.** J&J's lawyers said that you now call something

4 a bundle because it sounds more like asbestos.

5 Is that accurate?

6 **A. No, that's not accurate.**

7 **Q.** Is --

8 **A. They're both regulated asbestos.**

9 **Q.** Is --

10 **A. A fiber is a regulated asbestos. A bundle is**

11 **regulated asbestos. It makes no difference which one**

12 **it is.**

13 **Q.** Is -- is -- if there is a bundle of tremolite

14 that meets -- that has the chemical makeup, meets the

15 SAED to amphibole, and it's a bundle, is there any way

16 a scientist, based upon the methods, can call it a

17 cleavage fragment?

18 **A. No, none. It doesn't make any sense. It's --**

19 **a cleavage fragment can't form a bundle. You're**

20 **breaking a rock, and you get pieces. It's like**

21 **breaking a glass bottle.**

22 Now, all those pieces microscopy would have to

23 be perfect fibers all lining up together, in which

24 they're all pointed in the same direction, and they're

25 all touching. That is an impossibility, for a cleavage

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1 fragment or to smash up a rock and -- and make a
2 bundle. There should be no dispute about that.
3 Q. J&J's counsel said that the concentration
4 method Dr. Longo uses simply does not work.
5 Is that true?
6 A. No, that's not true at all. It's -- it's -- it
7 works really well. I'm not the only one who's done
8 that. Alice Blount did it and published it in a
9 peer-reviewed paper. Johnson & Johnson was looking at
10 it all the way back in the '70s.
11 I don't know how it doesn't work, other than,
12 no, it can't find chrysotile asbestos. But that
13 doesn't eliminate the fact that it's very good at
14 concentrating amphibole asbestos, if present, at the
15 concentrations that it can find.
16 Q. J&J's counsel said, "Dr. Pooley concluded
17 45 years ago that the concentration method doesn't
18 work."
19 Have you seen any documentation where
20 Dr. Pooley, 45 years ago, said the concentration method
21 and the heavy liquid separation doesn't work?
22 A. No, sir. I've seen the opposite. He was
23 looking at patenting that method in England. That's
24 not something that you would say doesn't work, if
25 you're thinking about getting a patent.

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1 Q. J&J's counsel said --
2 MR. CALFO: I object. Move to strike. That's
3 speculation. Pure speculation.
4 THE COURT: You may inquire on
5 cross-examination.
6 BY MR. SATTERLEY:
7 Q. J&J's counsel said, "he FDA discontinued the
8 concentration method because it doesn't work a long
9 time ago."
10 Have you seen any documentation from the FDA or
11 otherwise that said they dis- -- adopted or
12 discontinued the concentration method?
13 A. No. They sort of threw up -- I mean, what --
14 there's an explanation for that, if you would like me
15 to state what they actually said.
16 THE COURT: Just answer the question. If he
17 wants an explanation, he'll ask.
18 THE WITNESS: Sorry, Your Honor.
19 No.
20 BY MR. SATTERLEY:
21 Q. Couple other documents. Then I'm going to sit
22 down.
23 This is already into evidence. It's
24 Exhibit 163.
25 MR. SATTERLEY: May I approach, Your Honor?

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1 THE COURT: You may.
2 MR. SATTERLEY: And I'll hand you both of these
3 documents at the same time. They're both into
4 evidence. This is 163, and this one is 313.
5 BY MR. SATTERLEY:
6 Q. And I want to ask you about Dr. Langer,
7 Dr. Arthur Langer. You personally met Dr. Arthur
8 Langer?
9 A. Yes, I have, a number of times.
10 Q. Is Dr. Arthur Langer a -- a mineralogist?
11 A. He is.
12 Q. And has Dr. Arthur Langer been associated years
13 ago with the Mt. Sinai School of Medicine?
14 A. He was at one point.
15 Q. And this first document I want to show you
16 is -- it's -- that you've seen -- you've seen these --
17 both these documents in the past; correct?
18 A. Yes, sir, I have.
19 Q. And in doc- -- this 163, July 9, 1971, does
20 this relate to Dr. Langer's analysis of talc back in
21 1971?
22 A. It does.
23 Q. And does Dr. Langer, in this 1971 J&J
24 memorandum, talk about analysis of talc by use of the
25 light and the electron microscope of Johnson's Baby

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1 Powder?
2 A. It does.
3 Q. And does he -- does this J&J internal
4 memorandum talk about the meeting they had with
5 Dr. Langer, where Dr. Langer demonstrated his technique
6 for observing fibrous materials in the Johnson's Baby
7 Powder?
8 A. It does.
9 Q. And does this memorandum in 1971 talk about
10 Dr. Langer's finding talc and chrysotile in tissue in
11 1971 from folks being exposed to talcum powder product?
12 A. Yes, sir.
13 Q. And your lab has done analysis both those
14 products and on tissue; correct?
15 A. That is correct.
16 Q. And in this 1971 memorandum, does it say,
17 "Using electron microscopy, Dr. Langer has demonstrated
18 to me the presence of some very fine fibers at
19 moderately high magnification, which he identified as
20 chrysotile asbestos by the typical tubular appearance
21 of the fiber"?
22 Do you see that?
23 A. Yes, sir.
24 Q. And did we see in -- in some of the photographs
25 from Dr. Hutchinson at the University of Minnesota the

1 tubular appearance of chrysotile that's sort of --
2 that's being referenced there?
3 **A. Yes, sir, that's true. It's actually tubular.**
4 **It looks like a straw, a soda straw, that you're**
5 **looking through.**
6 **Q.** And he -- the summary of this internal J&J
7 document says, "Chrysotile is identified in the
8 electron microscope by its" characteristics --
9 "characteristic tubular appearance at high
10 magnification."
11 **Correct?**
12 **A. Yes, sir.**
13 **Q.** Now, the next document I want to ask you
14 about --
15 By the way, Dr. Langer is a noted mineralogist
16 that you've interacted with in meetings in the past;
17 correct?
18 **A. Either in meetings or as an expert on the other**
19 **side of me.**
20 **Q.** Okay.
21 **A. Both ways.**
22 **Q.** The next document I want to ask you about
23 relates to Exhibit 313. This is November of 1972, and
24 it's on Johnson & Johnson letterhead. It's into
25 evidence. And it's called "Antagonistic Personalities

1 in the Talc Story in the United States," and this is
2 written by Dr. Gavin Hildick-Smith, carbon copy to
3 Dr. Fuller, Dr. Nashed, Dr. Petterson, Dr. Sauchuk
4 Dr. Shelley, and Mr. Zeitz; correct?
5 **A. Yes, sir.**
6 **Q.** And they -- in this 1972 memorandum, they say,
7 "The increase in the profile of talc as a potential
8 health hazard has been actively promoted by a number of
9 individuals for a variety of reasons."
10 Then they go on to identify individuals, and I
11 want to ask you -- Dr. Selikoff, have you read many
12 papers from Dr. Selikoff at Mt. Sinai?
13 **A. I have.**
14 **Q.** Is Dr. Selikoff, in your opinion, a well-
15 regarded expert on asbestos -- asbestos and health
16 issues?
17 **A. Yes, sir. He's considered the pioneer of all**
18 **that.**
19 **Q.** It says, "Dr. Selikoff of Mt. Sinai Hospital,
20 who is an epidemiologist heavily involved with asbestos
21 and its adverse effects on health," he -- "has
22 observed (sic) considerable financing from a variety of
23 sources for research into the epidemiology of asbestos,
24 with particular reference to its industrial hazards.
25 "He retains a press agent on a full-time basis,

1 who gives him media exposure at regular intervals.
2 "Although he has stated that he doesn't believe
3 that talc is a health hazard and" larger -- "largely
4 concerns his activities with asbestos, he played a
5 significant role in the first talc meeting with the FDA
6 when he initiated proceedings by showing particularly
7 alarming pictures of patients suffering from cancer
8 relating to asbestos.
9 "It is believed that Dr. Selikoff wrote the
10 Merliss paper or at least edited it and provided
11 references for it. See attached."
12 My question to you, Dr. Longo: Have you read
13 and considered the Mt. Sinai work with regard to
14 asbestos in talc in the 1970s --
15 **A. Yes, I have.**
16 **Q.** -- what was published in the scientific
17 literature?
18 **A. Yes, sir.**
19 **Q.** And do you find that to be scientifically
20 useful in understanding the history of -- of asbestos
21 in talc?
22 **A. Yes.**
23 **Q.** They also have on their antagonistic
24 personalities list Dr. Langer, who works with
25 Dr. Selikoff and is a microscopist.

1 Do you consider yourself a microscopist?
2 **A. Not an antagonistic one, no.**
3 **Q.** Okay. But are you -- you're a -- a
4 microscopist; correct?
5 **A. Yes, sir. I'm a material science engineer**
6 **that's spent a lot of time in microscopy. I'm a**
7 **microscopist, TEM microscopist, SEM. So yes.**
8 **Q.** It says, "There are several other" --
9 "Dr. Selikoff's department who have the same mental
10 attitude as Dr. Selikoff."
11 Have you, over the course of your career, met
12 some of the other folks or -- or, I guess, read some of
13 the papers published by some of the other folks,
14 Dr. Arthur Rolle, Dr. -- forgot the other names.
15 Have you read some of the other Mt. Sinai
16 studies?
17 **A. Yeah. There was, you know, Ivan Rubin. There**
18 **was Dr. Rolle. Obviously, Dr. Langer, who stands out**
19 **the most. But, yes, I have looked over Selikoff's**
20 **guys' works in the past.**
21 **Q.** There are several other names here, and I'm not
22 going to go through them all, but I wanted to ask about
23 Dr. Lewin.
24 Dr. Lewin, who is a professor of analytical
25 chemistry at New York University, have you looked at

1 and considered Dr. Lewin's results and his findings of
2 asbestos in -- in talc?
3 **A. Yes, sir, I have.**
4 **Q.** They conclude, "We believe that the Selikoff
5 group, Mr. Kretchmer's group, Dr. Lewin, and
6 Dr. Weissler are in constant communication, although
7 there is some disagreement between Dr. Selikoff and
8 Mr. Kretchmer over Mr. Kretchmer's publicity and
9 Dr. Selikoff's research findings which were not
10 accurately presented in the newspaper."
11 My question to you is, have you ever taken all
12 the -- the reports that you've issued and put them in a
13 scientific journal?
14 **A. Not yet, no.**
15 **Q.** And have you just recently, in the past few
16 years, analyzed talc for the presence of asbestos?
17 **A. Yes, sir. I only started doing that two years**
18 **ago.**
19 **Q.** Okay. And prior to analyzing talc for the
20 presence of asbestos just a couple years ago, did you
21 know that Johnson's Baby Powder had asbestos in it?
22 **A. I had no idea.**
23 **Q.** Prior to analyzing the presence of asbestos in
24 Cashmere Bouquet just a few years ago, did you have any
25 clue whatsoever that it had asbestos in it?

1 **A. Not until the 2015 paper came out and I was**
2 **talking to Dr. Millette and others, who were starting**
3 **to do this work. But before that, never considered**
4 **that talcum powder would have asbestos in it that --**
5 **that we're finding.**
6 **Q.** When you said 2016 (sic), you mean the Gordon
7 paper in 2014?
8 **A. 20- --**
9 **Q.** 2014?
10 **A. 2014, 2015.**
11 **Q.** Okay.
12 **A. That's when I started noticing it.**
13 **Q.** And -- and prior to a couple years ago, when
14 you were analyzing this talc, had you ever had access
15 and reviewed the historical internal documents of
16 Johnson & Johnson regarding the presence of asbestos in
17 talc?
18 **A. No, not until I got involved.**
19 **Q.** And prior to just a couple years ago, had you
20 reviewed any internal company documents historically of
21 Cashmere Bouquet?
22 **A. No, sir.**
23 **Q.** Have all of the opinions been stated here
24 today, Dr. Longo, to a reasonable degree of scientific
25 certainty?

1 **A. Yes, sir.**
2 **MR. SATTERLEY:** I might have -- I may have
3 follow-up questions, depending on what questions these
4 folks ask you. Okay?
5 **THE WITNESS:** Sure.
6 **MR. SATTERLEY:** Thank you so much.
7 **THE COURT:** Mr. Calfo.
8 **MR. CALFO:** Yes, Your Honor.
9 **CROSS-EXAMINATION BY MR. CALFO:**
10 **Q.** Good afternoon, Dr. Longo.
11 **A. Good afternoon.**
12 **Q.** I'm just going to ask you one question right
13 off the bat.
14 **A. Sure.**
15 **Q.** You just told this jury under oath that you
16 have only started analyzing cosmetic talc two years
17 ago. Didn't you just tell the jury that under oath?
18 **A. Let's see. 2017, 2018, 2019. Yes, sir.**
19 **Q.** Okay. Good. We'll talk about that a little
20 bit later.
21 **A. I guess two and a half years now.**
22 **Q.** Okay. Let's start with a -- a few things, if
23 we could --
24 **A. Yes, sir.**
25 **Q.** -- that I told the jury in opening.

1 **MR. CALFO:** Your Honor, I would like to
2 publish, if I could, Defense Exhibit 421331.
3 **MR. SATTERLEY:** It's not in evidence,
4 Your Honor.
5 **MR. CALFO:** It's a demonstrative, Your Honor.
6 **THE COURT:** I haven't seen it.
7 **MR. CALFO:** May I -- may I approach?
8 **THE COURT:** Can we talk at sidebar.
9 (Whereupon, a sidebar between the Court and
10 counsel was had and not reported.)
11 **BY MR. CALFO:**
12 **Q.** Dr. Longo, what I am going to ask you is this:
13 Do you agree with this statement? You've never tested
14 cosmetic talc when you weren't being paid to do it by
15 the plaintiffs' lawyers; isn't that right, sir?
16 **A. That is correct.**
17 **Q.** And, in fact, you told the jury some numbers,
18 but isn't it true, Dr. Longo, that 100 percent of your
19 work in talc litigation is for the plaintiffs'
20 attorneys?
21 **A. Yes, that's correct.**
22 **Q.** In the last 30 years, working as an expert for
23 plaintiff law firms, you told us your company billed
24 \$30 million; is that right?
25 **A. Yes, sir. About a million a year.**

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1 Q. In fact, you've testified before, Dr. Longo,
2 that the money you've made working as a litigation
3 consultant and expert witness has allowed your lab to
4 survive; isn't that right?
5 A. That's a true statement.
6 Q. And one of the things that you mentioned before
7 is, you've got to keep your lights on; right?
8 A. Yes, sir. If you work in the office, you need
9 to keep the lights on.
10 Q. And just so there's no mistake, you own
11 75 percent of your company, don't you?
12 A. Yes, sir, I do.
13 Q. And you billed \$30 million just to the
14 plaintiffs' lawyers; true?
15 A. I believe that's correct. For all the work we
16 do, all the different scientists that work on the
17 projects, yes, sir.
18 Q. You're not a geologist; true?
19 A. I do not have a degree in geology.
20 Q. And you don't have a degree in mineralogy, do
21 you, Dr. Longo?
22 A. No, I don't.
23 Q. So let me ask you this: If the plaintiffs'
24 lawyers, when they hired you, were looking for somebody
25 who had a degree in geology and mineralogy, that

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1 wouldn't have been you, would it?
2 A. Well, if that was their criteria. I don't have
3 a degree in geology or mineralogy, so...
4 Q. Dr. Longo, you've never been to any of the
5 mines that you just told us about, have you?
6 A. No, sir, I haven't.
7 Q. And you mentioned -- I -- did you mention you
8 worked for NASA?
9 A. Yes, sir.
10 Q. Did you mention you work for ASTM?
11 A. I didn't mention I worked for NASA, but I have,
12 but I've never worked for ASTM.
13 Q. Okay. Well, the truth is, none of that work
14 that you had done that's on your resumé had anything to
15 do with testing cosmetic talc powder; isn't that right?
16 A. Yes and no. And I'll explain, if you like.
17 Q. Go ahead, Doctor.
18 A. No, it doesn't have anything to do with
19 analyzing cosmetic talc, per se, but it has everything
20 to do with the fact that we saw problems for scientists
21 for microscopic issues, and all of these studies that
22 we have done for all these different companies involved
23 some sort of development and understanding the problem
24 and using the best methodology.
25 So that's --

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1 Q. Doctor, we're going to go --
2 A. -- that's the "yes and no" part.
3 Q. We are going to go through some of the
4 documents that you told the jury about with Johnson &
5 Johnson.
6 First of all, you don't know anyone at
7 Johnson & Johnson; you didn't work there. Right?
8 A. You're correct on that.
9 Q. All right. We'll get into that in a little
10 bit.
11 But before we do, no government agency has ever
12 asked you to test cosmetic talc; isn't that right, sir?
13 A. That's correct.
14 Q. And you've not written a written,
15 peer-reviewed, published paper anywhere in the world in
16 any way relating to cosmetic talc; isn't that right?
17 A. That's correct. We have not published these
18 results yet.
19 Q. And Doctor, if plaintiff lawyers were looking
20 for somebody who was well published in the scientific
21 literature on cosmetic talc, that would not have been
22 you, would it?
23 A. No, it would not.
24 Q. So let me ask you this. You told the jury a
25 little bit about your background in material science.

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1 You remember that?
2 A. Yes, sir.
3 Q. You didn't take any courses whatsoever that
4 dealt with asbestos in undergraduate studies, did you?
5 A. That is correct.
6 Q. In other words, you didn't go to college to
7 study asbestos, did you?
8 A. No, sir, I didn't.
9 Q. In fact, you didn't become interested in
10 material science until after college; true?
11 A. Well, after my undergraduate degree, I -- my
12 whole life, I was going to be a veterinarian. I mean,
13 studied it, everything in my life since I was 6 years
14 old. Got my four-year degree and got rejected from
15 veterinary school. Couldn't believe it.
16 So I was looking -- I didn't have a Plan B, so
17 I was looking for a job, and the material science
18 department had an opening for a lab tech, because I had
19 to support myself.
20 Q. So Doctor, as I understand it -- --
21 A. And they invited me to be a graduate student
22 there, and I said, "No, no. I'm going to veterinary
23 school. I'm doing post baccalaureate."
24 And they said, "Well, I think maybe the board
25 would have a better idea" -- "it might be better if you

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1 were in graduate school."
2 I said, "Ah, okay," and I never looked back.
3 So that's how I became a material scientist.
4 Q. And I thank you for that. Thank you for that,
5 Doctor. We appreciate it.
6 A. You're welcome.
7 Q. Now, you didn't take any courses that
8 specifically dealt with asbestos to get your master's,
9 did you?
10 A. No.
11 Q. Is that true?
12 A. That's true.
13 Q. And you didn't take a single class that dealt
14 specifically with asbestos during your Ph.D. work, did
15 you, Doctor?
16 A. Not per se, no.
17 Q. In fact -- I think Mr. Satterley asked you --
18 you're not a medical doctor; right?
19 A. No, sir, I'm not.
20 Q. And when we talk about Ms. Schmitz -- you don't
21 treat patients; true?
22 A. No, sir, I don't.
23 Q. And you didn't review any of Ms. Schmitz's
24 medical records; true?
25 A. That is true, I did not.

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1 Q. And I think you told me under oath that you
2 cannot say one way or the other what caused
3 Ms. Schmitz' mesothelioma. True?
4 A. No, sir. I never talk about causation effects.
5 I let that -- others do --
6 Q. And --
7 A. -- debate or discuss that.
8 Q. And one of the things you told me in your
9 deposition -- in fact, I think you volunteered it --
10 is, you don't know where -- you are not going to opine
11 where her mesothelioma originated. True?
12 A. No, sir. I don't talk about medical issues.
13 Q. Okay. Now, you mentioned a little bit about
14 industrial hygiene; right?
15 A. Yes, sir.
16 Q. And you took no undergraduate or graduate -- or
17 graduate courses in industrial hygiene; isn't that
18 right?
19 A. That is correct.
20 Q. And you're not a certified industrial
21 hygienist; true?
22 A. That's true. I'm not.
23 Q. And you never took the test to be become
24 certified; correct?
25 A. That is correct.

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1 Q. And -- and we're going to -- as I told you, we
2 are going to talk about some internal Johnson & Johnson
3 documents. You told us you never worked at Johnson &
4 Johnson; right?
5 A. That's still correct.
6 Q. And you don't know Dr. Hopkins personally;
7 true?
8 A. That's true.
9 Q. And you don't know any recipient of any of the
10 Johnson & Johnson documents, do you, sir?
11 A. No, sir, I don't.
12 Q. And you've never spoken to any of them, have
13 you?
14 A. No, sir, I haven't.
15 Q. So let's talk a little bit about your
16 testifying in asbestos litigation. And I think you
17 told us since 1989 or 1990. Is that correct, Doctor?
18 A. I think I gave my first deposition in '91 or
19 so; '92, maybe, the latest.
20 MR. CALFO: Let's pull up Defense
21 Exhibit 42125, which -- I think the plaintiffs had a
22 different exhibit, which was --
23 I can't remember. Do you remember, Counsel?
24 MR. SATTERLEY: It was a defense exhibit. It
25 was, I think, 199 or something like that.

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1 MR. CALFO: Your Honor, can we fix it, get the
2 number? I have my exhibit, but I think the plaintiff
3 used his.
4 THE COURT: You can publish that one.
5 BY MR. CALFO:
6 Q. And Doctor, I don't want to belabor this too
7 much, but this was an advertisement you ran 30 years
8 ago. And you ran that ad also in the National Asbestos
9 Council magazine; true?
10 A. That's true.
11 Q. And did you tell the jury you weren't
12 advertising your litigation or lawsuit -- lawsuit
13 services here?
14 A. Yes, sir. I was advertising our final air
15 clearance and what a good job we did.
16 Q. So, even though you chose to picture yourself
17 in a courtroom in that photograph. That's true?
18 A. That's true.
19 Q. And you told the jury you were advertising your
20 laboratory services, but this photograph is not in your
21 fancy lab, is it, sir?
22 A. It's not in our lab, no.
23 Q. You're wearing a suit, aren't you?
24 A. Yes, sir.
25 Q. You're not wearing a lab coat; true?

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1 **A. That's still true.**

2 **Q.** And your quote there, on the top, if we look,

3 it says, "Will your TEM laboratory's data make it

4 through the toughest meeting of your life?"

5 Do you see that, sir?

6 **A. Yes, sir.**

7 **Q.** And that meeting you're portraying is a

8 courtroom; true?

9 **A. Yes, sir. If our client -- the data was**

10 **challenged and we had to go defend it for our client,**

11 **we would do it.**

12 **Q.** So the meeting that you are portraying is there

13 in a courtroom; true?

14 **A. That's true.**

15 **Q.** Let's go to the next one.

16 "Not only" -- if we can find it there. "Not

17 only will the data stand up in court" --

18 MR. CALFO: Can we pull that up?

19 Let me put it on the Elmo.

20 MR. SATTERLEY: It's 1099.

21 BY MR. CALFO:

22 **Q.** "Not only will the data stand up in court, so

23 will the professionals who documented it."

24 Right?

25 **A. Yes, sir. I think it's missing some stuff.**

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1 **Q.** I think I heard you tell Mr. Satterley that

2 language means standing up in court for final air

3 clearance samples.

4 Did you tell Mr. Satterley that?

5 **A. Yes, sir.**

6 **Q.** By the way, just so we're clear, final air

7 clearance samples, those are air samples taken from

8 buildings like schools where asbestos has been removed;

9 isn't that right?

10 **A. That is correct.**

11 **Q.** But, Doctor, you've never testified in court to

12 defend your air clearance results, have you?

13 **A. No, sir, I haven't. We're that good.**

14 **Q.** And if we look at the bottom of your

15 advertisement, it says, "Professional asbestos

16 consultants and contractors know that when the job

17 demands the best final air clearance testing by TEM,

18 you go to the people whose rigorous in-house quality

19 control measures produce TEM results and professional

20 support that stands up in the toughest tests you may

21 face." Isn't that right?

22 **A. Yes, sir, that's what it states.**

23 **Q.** And again, Doctor, what you're talking about

24 are the toughest tests you face in court; isn't that

25 true?

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1 **A. For clients who are taken in there, yes, sir.**

2 **Q.** And, since this ad was run, your business in

3 litigation has really picked up, hasn't it, sir?

4 **A. Since the ad, not really. It's -- had nothing**

5 **to do with getting involved in litigation a couple**

6 **years later.**

7 **Q.** Well, since this ad ran in the National

8 Asbestos Council magazine, you've given about 3,000

9 depositions; right?

10 **A. Yes, sir. Over 30 years, that's about correct.**

11 **Q.** And you testify, on average, once or twice a

12 week; isn't that true, sir?

13 **A. That is correct.**

14 **Q.** And you've testified in front of juries just

15 like we have now hundreds of times, haven't you, sir?

16 **A. Yes. That's correct.**

17 **Q.** And you've been designated as an expert several

18 thousand times by plaintiffs' lawyers suing for money

19 in litigation, haven't you, sir?

20 **A. That's probably correct, yes.**

21 **Q.** And you've testified to this: You think every

22 plaintiff's attorney in the country lists you in any

23 type of asbestos litigation; isn't that right, sir?

24 **A. Yes, sir, I think that's happened.**

25 **Q.** Let's talk about some of the work you've done

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1 for plaintiff law firms before you ever started working

2 on cosmetic talc. Okay?

3 **A. That's fine.**

4 **Q.** And by the way, you know, people have been

5 testing cosmetic talc for over 70 years; right?

6 **A. That's what it looks like.**

7 **Q.** And you just told the jury the first time you

8 ever got involved was two or three years ago; right?

9 **A. Two and a half years ago, that's correct.**

10 **Q.** But you've been doing asbestos litigation for

11 decades and decades and decades; isn't that right,

12 Doctor?

13 **A. Over a few decades, yes, sir.**

14 **Q.** For the better part of your career, Doctor,

15 you've run tests on asbestos-containing products;

16 right?

17 **A. Yes, sir. That's my area of interest.**

18 **Q.** And why don't you tell the jury about the

19 asbestos-containing products -- well, let me ask you

20 this: You've testified about asbestos-containing

21 automotive brakes; true?

22 **A. That's true.**

23 **Q.** Asbestos-containing boiler insulation?

24 **A. That is correct.**

25 **Q.** Automotive brake clutches?

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1 A. Yes, sir.

2 Q. Compressors?

3 A. If it has a certain type of gasket in it, yes,

4 sir.

5 Q. Cement pipe?

6 A. Yes.

7 Q. Has a lot of asbestos in it, doesn't it?

8 A. 20 -- let's see -- runs anywhere from 15 to

9 22 percent asbestos.

10 Q. And we don't have it in the courtroom, but

11 there are ceiling tiles that have asbestos that you've

12 testified about; true?

13 A. That's -- in the past, that's correct.

14 Q. Floor tiles with asbestos in it?

15 A. Yes, sir.

16 Q. Gaskets have a lot of asbestos, don't they,

17 sir?

18 A. Industrial gaskets have quite a bit, about

19 70 percent. Anywhere from 65 to 85 percent depending

20 on what specification, what pressure, what temperature

21 it has to be at.

22 Q. Insulating cement. You testified about all the

23 asbestos in that, haven't you, sir?

24 A. Yes, sir.

25 Q. Joint compound?

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1 A. That's correct.

2 Q. And joint compound is the stuff you put on your

3 construction walls?

4 A. For drywall, the seams. Typically known as mud

5 where they can take a seam, put drywall on it, sand it

6 to the point where you can't tell where that seam is

7 anymore, or nail hole, or what have you.

8 Q. I'm going to ask your help with this, Doctor.

9 What's Monokotay (phonetic)? I don't even know

10 how to say it.

11 A. Monokotay?

12 Q. Yeah. What is that?

13 A. Well, at this point I could just make up

14 anything. I think what you're trying to say is

15 Monokote fireproofing, Monokote 2 -- 1, 2, and 3.

16 Q. And that has asbestos in it?

17 A. Yes, sir. That was a fireproofing that was

18 manufactured by W.R. Grace from about 1961 to 1971.

19 Had approximately 10 percent chrysotile asbestos,

20 35 percent vermiculite, and 65 percent gypsum. Or

21 55 percent gypsum.

22 Q. Just to round this off, I don't want to take

23 too much time, but you've testified in cases because

24 pipe has insulation around it, with asbestos; right?

25 A. Yes, sir.

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1 Q. Packing?

2 A. Yes.

3 Q. Textured paint?

4 A. Some textured paints do, not all.

5 Q. And wire has asbestos. You've testified about

6 that, haven't you?

7 A. Yes, sir. Primarily for defendants, because

8 for whatever -- because it doesn't release asbestos

9 like some of the other asbestos products.

10 Q. Now, you were paid by plaintiffs' attorneys in

11 lawsuits to test those asbestos-containing products,

12 weren't you?

13 A. No. I wasn't paid by defense -- plaintiffs'

14 attorneys to test the wire. That was defense

15 attorneys. And many of those tests we did on our own

16 for research. But some of those tests were paid for by

17 plaintiffs' attorneys.

18 Q. Doctor, you were hired to measure the amount of

19 asbestos those products have in them, weren't you?

20 A. In some cases, yes; in some cases, no.

21 Q. And of those products, most of them had

22 asbestos where the product was intentionally added as

23 part of its design; true?

24 A. That is true.

25 Q. And some of them, like the gaskets, I think you

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1 told us, could contain as much as 85 percent asbestos;

2 true?

3 A. Industrial gaskets, that's very true.

4 Q. And that's different from a product that may

5 have a trace amount of asbestos as an accessory

6 ingredient; true?

7 A. It's different concentrations, that's true, but

8 a completely different type of product. One's been

9 manufactured with asbestos and you actually have to do

10 something to it to get high exposures.

11 The other one, even though there are trace

12 amounts, is a very fine powder that you shake out on to

13 your body every day if you use it continuously. So you

14 can't compare one with just a little bitty trace versus

15 one that has a lot of asbestos. It all depends what

16 you do to that one with all the asbestos.

17 Q. Doctor, what you've done for 30 years is you

18 come into court and you talk about all those

19 asbestos-containing products and all the dust and that

20 the people breathe; right? That's what you've been

21 doing. You've done tests on that.

22 A. Yeah. But you're kind of embellishing what I

23 do.

24 MR. CALFO: Your Honor, I move to strike.

25 THE COURT: He can answer the question.

<p style="text-align: right;">278</p> <p>1 MR. CALFO: Okay. Please do.</p> <p>2 THE COURT: He's responding directly to your</p> <p>3 question.</p> <p>4 THE WITNESS: What I do is just don't go in and</p> <p>5 say all this dust comes flying out. We look at</p> <p>6 particular type of work practices. You can take an</p> <p>7 asbestos gasket that has 70 percent asbestos in it,</p> <p>8 pick it out, put -- it's new, put it on a flange, you</p> <p>9 don't get exposed -- or you can't -- too low to measure</p> <p>10 it. But when they take that gasket off at a later date</p> <p>11 and use a power grinder at 4500 rpm that's using air</p> <p>12 blowing around, yes, you get very high exposures.</p> <p>13 What we're talking about here is powder that is</p> <p>14 as fine as cement powder that you are putting on your</p> <p>15 body. So you can't compare one has a lot of asbestos</p> <p>16 in it versus another one that's a very fine powder</p> <p>17 because of the asbestos content.</p> <p>18 So it's different.</p> <p>19 BY MR. CALFO:</p> <p>20 Q. Well, let me -- for example, here, in some of</p> <p>21 the Johnson's Baby Powder bottles you tested, you</p> <p>22 detected no asbestos; right, Doctor?</p> <p>23 A. That is correct.</p> <p>24 Q. In fact, I told the jury in opening of the</p> <p>25 bottles you claim to find asbestos in, the lowest</p>	<p style="text-align: right;">280</p> <p>1 A. That is correct.</p> <p>2 Q. And the jump from 40 to 70 percent is primarily</p> <p>3 due to your work now in talc litigation, which is just</p> <p>4 in the last two or three years; right, Doctor?</p> <p>5 A. That is very true.</p> <p>6 Q. Now, before we talk about your testing, let's</p> <p>7 talk about what you were asked to do, okay?</p> <p>8 It wasn't, I think you said, until 2016, or was</p> <p>9 it 2017 that you started getting involved in cosmetic</p> <p>10 talc litigation?</p> <p>11 A. It was the end, I believe, of 2016 -- 2017 when</p> <p>12 we -- after researching and picked the type of analysis</p> <p>13 we were going to do and draw the heavy liquid. I think</p> <p>14 it was early 2017 we started doing the first analysis.</p> <p>15 Q. Okay, Doctor. And it wasn't until late 2016</p> <p>16 when you were asked by Mr. Satterley that you got</p> <p>17 involved in cosmetic talc litigation; right?</p> <p>18 A. That is correct.</p> <p>19 Q. And you've testified, I think you just told us,</p> <p>20 under oath, that prior to 2016, you had never tested a</p> <p>21 cosmetic talc powder at all for any reason; right?</p> <p>22 A. I don't think so. I can't find any record of</p> <p>23 cosmetic talc versus industrial talc.</p> <p>24 Q. Where I'm going with this is, so if the</p> <p>25 plaintiff lawyers, when they hired you, were looking</p>
<p style="text-align: right;">279</p> <p>1 concentration was 0.0000033. Do you remember finding</p> <p>2 asbestos of that amount, percent by weight?</p> <p>3 A. Yes. By weight percent, yes.</p> <p>4 Q. So we all know what we're talking about here,</p> <p>5 just so we're clear, you've been talking all day about</p> <p>6 Johnson's Baby Powder and Cashmere Bouquet; right?</p> <p>7 A. Yes, sir.</p> <p>8 Q. And so we all know what we're talking about</p> <p>9 here today, when you talk about talcum powders used on</p> <p>10 babies, you're talking about Johnson's Baby Powder;</p> <p>11 right?</p> <p>12 A. Yes, sir.</p> <p>13 Q. And, in fact, of the bottles of Johnson's Baby</p> <p>14 Powder you claim to find asbestos in, the highest</p> <p>15 amount was 0.035; true?</p> <p>16 A. By weight percent, not by fiber bundle count.</p> <p>17 That's true.</p> <p>18 Q. And before you got heavy into cosmetic talc</p> <p>19 lawsuits in the last two or three years, about 35 to</p> <p>20 40 percent of MAS's business came from consulting in</p> <p>21 litigation; true?</p> <p>22 A. That's true.</p> <p>23 Q. But in the past year, your litigation</p> <p>24 consulting increased to about 70 percent of your entire</p> <p>25 business; isn't that right?</p>	<p style="text-align: right;">281</p> <p>1 for somebody who had been in the practice of testing</p> <p>2 cosmetic talc before 2016, that would not have been</p> <p>3 you; right?</p> <p>4 A. That's correct.</p> <p>5 Q. In 2016 what happened is you received samples</p> <p>6 of Johnson & Johnson talc from three plaintiff law</p> <p>7 firms; right?</p> <p>8 A. That's correct. 2016, 20' -- early 2017, I</p> <p>9 think.</p> <p>10 Q. Thank you, Doctor.</p> <p>11 And one of the law firms that you received the</p> <p>12 samples from was Mr. Satterley's firm and Ms. Clancy's</p> <p>13 firm, the Kazan firm; true?</p> <p>14 A. That is true.</p> <p>15 Q. The other firm was the Lanier law firm?</p> <p>16 A. That is true.</p> <p>17 Q. And the other one I think you told us about was</p> <p>18 the Simon Greenstone Panatier firm; true?</p> <p>19 A. That is correct.</p> <p>20 Q. And the plaintiff lawyers at that time didn't</p> <p>21 just send you Johnson & Johnson talc to test, did they?</p> <p>22 A. At some point we also received Cashmere Bouquet</p> <p>23 and we've also received others. Avon, I believe; Jean</p> <p>24 Nate, I think; certainly Chanel; and Beverly Hills --</p> <p>25 Q. And by the way --</p>

1 A. Giorgio Beverly Hills.
 2 Q. By the way, you mentioned Avon. Is it your
 3 opinion that all the Avon products that Ms. Schmitz
 4 used had asbestos in them?
 5 A. Based on our analysis of Avon products, I would
 6 say more likely than not, yes.
 7 Q. And, Doctor, on the very same day you were sent
 8 the samples your lab purchased two bottles each of
 9 Johnson's Baby Powder and Gold Bond; right?
 10 You know what Gold Bond medicated powder is?
 11 A. Yes, sir. I'm just trying to think. I think
 12 you're correct.
 13 Q. But you know -- or let me ask it this way: But
 14 you knew from the very start, when you were hired, your
 15 work was going to primarily involve Johnson & Johnson;
 16 right?
 17 A. That's what we were asked to test the most,
 18 yes.
 19 Q. Because it was clear to you the interest of
 20 these plaintiff lawyers was in Johnson & Johnson --
 21 MR. SATTERLEY: Objection, Your Honor.
 22 THE COURT: Sustained.
 23 BY MR. CALFO:
 24 Q. In fact, almost one year after you got --
 25 By the way, you got bottles of Cashmere Bouquet

1 in 2016 and 2017, didn't you?
 2 A. 2017, yes, sir.
 3 Q. Almost one year after you got the bottles of
 4 Cashmere Bouquet and Gold Bond powder, you hadn't even
 5 tested them after a year, had you?
 6 A. No, I don't think so.
 7 Q. Is that true?
 8 A. That's true.
 9 Q. And when these three plaintiff law firms came
 10 to you -- and they paid you to test the Johnson's Baby
 11 Powder; right?
 12 A. Yes, sir. Like with all clients, when we agree
 13 to do work, we -- we will bill them for our work.
 14 Q. And when these three plaintiff law firms came
 15 to you, Doctor, and they paid you to test the bottles
 16 of Johnson's Baby Powder, they asked you to look for
 17 amphiboles; right?
 18 A. Yes, sir.
 19 Q. And plaintiffs' attorneys didn't say to you,
 20 look for asbestos or asbestiform amphibole, they just
 21 told you to look for amphibole; right?
 22 A. I'm trying to remember back. They were just,
 23 you know, look to see if there's any regulated asbestos
 24 in the product is what I believe happened. And that's
 25 what we did. We didn't choose or pick what regulated

1 asbestos was in there. We just analyzed what was
 2 there.
 3 Q. Doctor, do you remember testifying in a case
 4 called *Blinkinsop*?
 5 A. Yes, sir, I think so.
 6 MR. CALFO: Your Honor, just to make this --
 7 we're getting to the end of the day -- may I show the
 8 witness the testimony to see if it refreshes his
 9 memory?
 10 MR. SATTERLEY: Can I get a copy?
 11 MR. CALFO: Of course. You can look at it.
 12 THE COURT: What page are you showing?
 13 MR. CALFO: I'm showing the witness page 215.
 14 MR. SATTERLEY: 250?
 15 MR. CALFO: 215.
 16 BY MR. CALFO:
 17 Q. Doctor, please just look at page -- lines 10
 18 through 12, okay? And let me just ask you this,
 19 Doctor: The plaintiffs' lawyers didn't ask you to look
 20 for asbestos, they asked you to look for amphiboles;
 21 right?
 22 A. That's what it states, yes.
 23 Q. And not all amphiboles are asbestos; true?
 24 A. That's true.
 25 Q. In fact, there are asbestos varieties that --

1 maybe I'll do it this way: You've seen the chart of --
 2 have you -- well, let me -- let me publish what -- we
 3 can't publish it until I get --
 4 THE COURT: That's the one you used in opening
 5 statement?
 6 MR. CALFO: Yes, Your Honor.
 7 THE COURT: You can publish it.
 8 BY MR. CALFO:
 9 Q. This is just for -- Doctor, I want you to help
 10 us educate the jury real quickly, if we could.
 11 Now, asbestos varieties are on the left and
 12 nonasbestos varieties are on the right.
 13 Do you see that, sir?
 14 A. I see that's what it states.
 15 Q. And, for some, the asbestos version and
 16 nonasbestos versions have different names; right,
 17 Doctor?
 18 A. Yes, sir.
 19 Q. So, for example, if we look on the right, the
 20 nonasbestos form is called riebeckite and the asbestos
 21 form on the left is crocidolite; right, Doctor?
 22 A. That's what it states.
 23 Q. And there are asbestos types of tremolite and
 24 nonasbestos types of tremolite; right, Doctor? Just
 25 generally.

1 A. Well, yeah, depending if it's just pieces of
2 rock of tremolite versus fibrous, that would be
3 correct.
4 Q. So let me just ask it. There are asbestos
5 types of tremolite, there are nonasbestos types of
6 tremolite; right, Doctor?
7 A. Yes. The same mineral, the same chemistry,
8 same everything except one is pieces of rock, the other
9 is fibrous.
10 Q. And sometimes the nonasbestos tremolite can be
11 referred to as common or massive tremolite; right?
12 A. Sometimes, yes.
13 Q. And sometimes nonasbestos tremolite can be
14 referred to as just tremolite; right?
15 A. Typically not, at least not in my area. When
16 you say "tremolite," you either have to define it as
17 tremolite nonasbestiform or cleavage fragment tremolite
18 or tremolite asbestos. Not called just "tremolite." I
19 don't agree with that.
20 Q. Well, let me -- let me just ask you this:
21 There are asbestos types of anthophyllite; true?
22 A. Fibrous anthophyllite, which is asbestos.
23 Q. And nonasbestos types of anthophyllite; true?
24 A. True if it is, in fact, pieces of cleavage
25 fragment, not fibrous, that's true.

1 Q. And so, Doctor, if you were asked to look for
2 amphiboles and not asbestos, what you were asked to do
3 is look for any of the amphiboles, not just on the left
4 side but also the nonasbestos versions; right?
5 A. We looked to characterize it if it had cleavage
6 fragments versus asbestos. We -- we characterize what
7 is present. Not just looking for one thing or the
8 other.
9 Q. Well, staying with this chart, you also were
10 not asked to look for chrysotile asbestos, were you?
11 A. It's been too long. I just don't recall.
12 Q. Maybe we can talk about that tomorrow, because
13 we've got four minutes.
14 Now, Doctor, we've heard and will likely hear
15 of testing --
16 MR. CALFO: And maybe, since we don't have
17 time, I'll move on, Your Honor.
18 THE COURT: It's your cross-examination.
19 MR. CALFO: So I move to strike the question.
20 BY MR. CALFO:
21 Q. Doctor, you've analyzed about a hundred bottles
22 of Johnson's talcum powder; right?
23 A. 107.
24 Q. And you've never reported finding any
25 chrysotile; right?

1 A. That's correct. You wouldn't for this -- using
2 this protocol.
3 Q. And that's because one of the drawbacks of the
4 concentration method -- or I think you called it the
5 Blount method; is that right?
6 A. Well, there's the concentration method, Blount
7 PLM, and then ISO 22262-2 is the talc heavy density
8 liquid method for PLM, TEM, and SEM.
9 Q. So where I'm going with this is one of the
10 drawbacks of the concentration method is you can't find
11 chrysotile; right?
12 A. That's correct.
13 Q. So now, I think you also conduct PLM tests
14 without the concentration method; is that true?
15 A. That's true.
16 Q. And to this day, using that method, you still
17 haven't found chrysotile in the Johnson's talc; true?
18 A. That's true.
19 Q. And one thing I think you criticized Johnson &
20 Johnson for doing was not adopting the concentration
21 method. Right?
22 A. That's right.
23 Q. To this day, the concentration method has not
24 been adopted or approved by any regulatory agency in
25 the United States; right, Doctor?

1 A. That is correct.
2 Q. That would include the EPA; right?
3 A. Heavy density liquid they don't recommend, but
4 they do have other concentration methods that they have
5 laid out from acid dissolution to remove soluble
6 materials to muffle furnace to remove polymer or
7 plastic-type materials. So it concentrates, just not
8 heavy liquid density.
9 Q. That would include the Mine Safety and Health
10 Administration; correct, Doctor?
11 A. That is correct.
12 Q. And that would include the Occupational Safety
13 and Health Administration, or OSHA; true?
14 A. That is true.
15 Q. All right.
16 MR. CALFO: Your Honor, I'm going into a new
17 area. Would this be an appropriate time? I hate to
18 ask the Court, but I am --
19 THE COURT: We'll go home on that one.
20 MR. CALFO: Thank you, Your Honor.
21 THE COURT: Ladies and gentlemen, we're going
22 to end for the day. We'll see you back here tomorrow
23 morning. We'll get started again with the
24 cross-examination of this same witness.
25 Have a pleasant evening. Don't forget the

1 admonition that it's your duty as jurors not to
 2 converse amongst yourselves or with anyone else on any
 3 subject connected with the trial or to form or express
 4 any opinion thereon until the matter is submitted to
 5 you.
 6 Have a pleasant evening.
 7 (Whereupon, the following proceedings were held
 8 outside the presence of the jury:)
 9 THE COURT: The jurors have departed the
 10 courtroom.
 11 THE WITNESS: Your Honor, may I be excused?
 12 THE COURT: Until tomorrow. You've got to be
 13 back here.
 14 THE WITNESS: Oh, I'll be back.
 15 MR. SATTERLEY: Leave everything except your
 16 report -- anything you brought you can take with you.
 17 Anything that was presented to you, leave it.
 18 THE WITNESS: It's right here. I haven't taken
 19 any of that.
 20 THE COURT: All right. Is there anything we
 21 need to put on the record regarding today's proceeding?
 22 MR. SATTERLEY: The only thing, at the end of
 23 the day, Your Honor said, the Scala exhibits --
 24 THE COURT: We'll get to that.
 25 Mr. Calfo, Mr. Sharp, is there anything we need

1 to put on the record?
 2 MR. GARY SHARP: No, Your Honor.
 3 MR. MULARCZYK: No, Your Honor.
 4 THE COURT: All right. Let's move on to the
 5 exhibits that Mr. Satterley would like to offer into
 6 evidence.
 7 What would you like to offer into evidence,
 8 Mr. Satterley?
 9 MR. SATTERLEY: I'm sorry?
 10 THE COURT: What would you like to offer into
 11 evidence?
 12 MR. SATTERLEY: Your Honor, I apologize. I
 13 don't have at my fingertips the disputed exhibits here.
 14 Yes.
 15 The disputed exhibits are Trial Exhibit 3573,
 16 3574, 3577, 3578, 3580, 3581, 3582, 3588, 3590, 3592,
 17 3593, 3594, 3595, 3596, 3597, 3599, 3600, 3601, 3603.
 18 3604, and 3611.
 19 THE COURT: All right. You can keep that.
 20 MR. MULARCZYK: Do you have a set of the
 21 documents to look at as we go through each one? Okay.
 22 THE COURT: All right. Do you have any
 23 objection to those?
 24 MR. MULARCZYK: Yes, Your Honor. It would help
 25 me -- I don't have that list in front of me. I have

1 the ones that we've submitted objections to based on
 2 the exhibit number for the deposition. If we could
 3 go --
 4 THE COURT: I can coordinate.
 5 Number 6 on the Scala deposition is 3573.
 6 MR. MULARCZYK: Correct. Our objection to this
 7 is based on authenticity, hearsay, and relevance.
 8 THE COURT: All right. First -- the first
 9 thing is that -- authenticity. The witness testified
 10 that this is a document from the National Safety
 11 Council but claimed that she'd never seen it before.
 12 MR. MULARCZYK: And part of the problem with
 13 almost all of the documents to which we've objected to
 14 is exactly that position. They were documents that
 15 were put in front of her that she'd never seen before,
 16 and so --
 17 THE COURT: I understand. Ms. Clancy or
 18 Mr. Satterley, what is the authenticity that has been
 19 demonstrated to the Court regarding Exhibit 3573?
 20 MR. SATTERLEY: Your Honor, this was produced
 21 by Colgate in response to discovery, number one.
 22 Number two, we cite to the Evidence Code 1414. It's
 23 authentic because it's in a monthly periodical and
 24 Colgate has admitted that they're continuously a member
 25 of the National Safety Council since 1911. We believe

1 that, because it was in a monthly periodical, that is a
 2 presumption of authenticity. And so we believe this is
 3 admissible. And we cite to, I think, in our -- the
 4 *Greenspan* case and also to the *StreetScenes v. ITC*
 5 *Group* case, 103 Cal.App.4th 233. As well as Evidence
 6 Code Section 645.
 7 THE COURT: Okay. You're mixing more than just
 8 authenticity here. That's okay.
 9 Mr. Mularczyk, why isn't this a document that
 10 was in the possession of your client who was a member
 11 of the organization that published this document and
 12 why isn't it relevant to show what they knew and when
 13 they knew it?
 14 MR. MULARCZYK: Well, to address the first
 15 point, nothing that Mr. Satterley said is actually
 16 evidence. There is -- nobody has testified that this
 17 was a monthly periodical, that Colgate was receiving
 18 it, that Colgate was aware of it. This was a document
 19 that was passed in front of Ms. Scala for the first
 20 time in front of her deposition, and then --
 21 THE COURT: I understand. She's testifying for
 22 Colgate, and it was in Colgate's possession, but she'd
 23 never seen it before.
 24 MR. MULARCZYK: Nobody has said that. There's
 25 been no evidence --

1 THE COURT: Mr. Satterley just told me that it
2 was produced by Colgate in the production of documents.
3 MR. MULARCZYK: As an attachment to the
4 exhibit. As an exhibit to her deposition transcript.
5 We produced her deposition transcript in the exhibit
6 that was attached to it.
7 What's important --
8 THE COURT: Oh, all right. Let me get that
9 straightened out.
10 Mr. Satterley, was this produced by Colgate in
11 a request for production of documents or was this
12 produced by you at the deposition and then?
13 MR. RIVAMONTE: Your Honor, Ian Rivamonte for
14 the plaintiff. It was produced by Colgate in response
15 to plaintiff's document requests as set forth in our
16 brief.
17 MR. MULARCZYK: Let me make something clear.
18 The document production --
19 THE COURT: You had it in your possession to
20 produce it; right?
21 MR. MULARCZYK: We received this because we had
22 a copy of her transcript with the exhibits attached to
23 her transcript. That's how we received a copy of this.
24 I think it's --
25 THE COURT: Wait. I'm hearing two different

1 things. I'm hearing that the lawyers for Colgate
2 brought it to Ms. Scala's deposition.
3 MR. MULARCZYK: No.
4 THE COURT: Isn't that what you just told me?
5 MR. RIVAMONTE: No, Your Honor. During
6 Ms. Scala's deposition, it was the plaintiffs' counsel
7 in that case. The *Polakow* case that brought it.
8 THE COURT: I don't much care who produced it.
9 Unless it was Colgate.
10 MR. RIVAMONTE: Colgate did produce it,
11 Your Honor, in response to plaintiff's discovery
12 request in this case.
13 THE COURT: Got it. Okay.
14 All right. Mr. Satterley, how is this an
15 authentic document?
16 MR. SATTERLEY: Well, we -- number one, we
17 believe that they produced --
18 THE COURT: They haven't admitted it.
19 MR. SATTERLEY: No, I don't believe they have
20 admitted it. We believe that they produced it in
21 response to our discovery request asking to produce all
22 documents regarding what they knew or should have
23 known, and they produced this document.
24 They should have or could have as -- not
25 produced it and said they didn't. It's not a document.

1 It is a periodical. The Court -- you know, there's --
2 I apologize, Mr. Rivamonte, I've been working
3 with Dr. -- asking questions of Dr. Longo all day, so
4 my mind's -- beside myself right now. Can you help me
5 out.
6 MR. RIVAMONTE: Yes, I can.
7 May I, Your Honor?
8 THE COURT: Sure. Of course.
9 MR. RIVAMONTE: So Evidence Code Section 645.1
10 has a presumption that a periodical published more than
11 regular issue in average intervals not exceeding three
12 months is presumed authentic.
13 Here, Your Honor, Exhibit 35' -- I believe it's
14 3573 or Scala Exhibit 6, if you look at the contents
15 page of that, if you look at my trial brief, the
16 plaintiff's trial brief, my declaration, Exhibit E, the
17 contents page says that it's a monthly periodical of
18 the National Safety Council. Therefore, under Evidence
19 Code 645.1, there is a presumption that it is authentic
20 and now the burden shifts to Colgate to prove that it
21 is not.
22 THE COURT: All right. Presuming that it's an
23 authentic periodical, how is it relevant when the
24 corporate representative testifies that she doesn't --
25 she's never seen it before? Colgate has never seen it

1 before.
2 MR. SATTERLEY: Knew or -- okay.
3 MR. RIVAMONTE: Your Honor, it is relevant to
4 know this. In *People v. ConAgra*, *ConAgra* was -- for
5 example, in that case, *ConAgra* was a member of several
6 trade organizations. Those trade organizations issued
7 periodicals and other reports about the hazards related
8 to *ConAgra*'s product. In that case the appellate court
9 found that, for the purposes of notice, those -- those
10 publications from those trade organizations in which
11 *ConAgra* belonged in is deemed notice of knowledge of
12 the actual hazard in the product. Here it is the same
13 thing. National Safety Council, Colgate was a member
14 and therefore there is at least notice here since
15 Colgate was a member that -- of asbestos-related health
16 hazards as set forth in that National Safety Council
17 publication.
18 THE COURT: Well, how do you bridge the gap
19 between the witness testifying for Colgate that says
20 that Colgate's never seen this before, that they didn't
21 have it in their possession?
22 MR. RIVAMONTE: Under --
23 THE COURT: In *ConAgra* they had all that stuff
24 in their possession, didn't they?
25 MR. RIVAMONTE: Yes. But in

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1 *Anderson v. Owens-Corning*, the standard is knew or
2 should have known. So even though -- if Ms. Scala
3 claims that she does not -- or Colgate does not know of
4 this document in particular, it should have known it
5 based on its membership in the National Safety Council
6 during that time.

7 Colgate was a member of that council for, I
8 think since its inception, if I recall correctly.

9 And Colgate was also a member of several
10 committees in the National Safety Council, some of
11 which relate to asbestos, as I recall correctly.

12 So, for that reason, Your Honor, it's a
13 should-have-known standard. Knowledge would be great.
14 Actual knowledge would be fantastic, but we're not --
15 for purposes of notice and purposes of
16 *Anderson v. Owens-Corning*, the should-have-known
17 standard applies.

18 THE COURT: Is that correct about Owens' claim?

19 MR. MULARCZYK: No, Your Honor. You can't --
20 the way it works with authenticity and with the known
21 or knowable standard is you can't simply make the
22 argument and say so and then that's the case. That's
23 not how it works. You actually have to submit evidence
24 and make a connection between the defendant and the
25 topic or the harm or the injury that they should or

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1 should have been aware of. There is nothing in this
2 document, there is no evidence that's been presented in
3 this case that Colgate had receipt of this document,
4 that this document should have told Colgate anything or
5 that it should have advised him of any harm or injury.
6 There's just no connection here. There's nothing at
7 all.

8 MR. GARY SHARP: Your Honor, if I might,
9 because I've been around forever, I know these
10 documents from a historic state-of-the-art standpoint.
11 It's not true. Colgate is not mentioned anywhere in
12 any of the National Safety Council pages, either by way
13 of membership, either by way of board of directors,
14 either by way of membership on a committee. If
15 Mr. Rivamonte can show us that we were on a committee,
16 then we can have that discussion. I've never seen it.

17 We have a list of every publication that was
18 maintained by Colgate, which was attached to the
19 deposition as Exhibit Number 5, which has been admitted
20 into evidence, the National Safety Council or the
21 *National Safety News* does not appear on this list.

22 These were not within Colgate's possession.

23 THE COURT: All right. The objection is going
24 to be sustained on this one.

25 Let's move to the next one, 3574, Number 7.

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1 MR. MULARCZYK: The same.

2 MR. GARY SHARP: Same objection.

3 MR. RIVAMONTE: Your Honor, I would like to
4 reiterate here. At this stage we're talking about
5 authenticity. And it's a very low standard. The
6 question is whether the document produced or at issue
7 is fake.

8 THE COURT: The difficulty is that you have --
9 you may have a document that is an authentic newspaper
10 article, but you have a witness from the company saying
11 that they never saw it before, that the company had
12 never seen it before. That's the -- the difficulty is
13 not so much that it's -- it says that it's a magazine
14 article and, on the face of it, it says that it's
15 published more than X-number of times. But the problem
16 here is that there's evidently no evidence that Colgate
17 had it in their possession so that they can be charged
18 with having knowledge of what it said.

19 Maybe that wouldn't be true for *The New York*
20 *Times*, but for something like this, I'm going to
21 sustain the objection to that one as well.

22 Moving on. Your next one is 3577. The
23 objection is sustained on that one. That's my motion
24 in limine. Actually, let's go back.

25 Do you want to argue that one?

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1 MR. MULARCZYK: Well, Your Honor, I would...

2 MR. GARY SHARP: Again, Your Honor, we have
3 within our documents the volumes of the *New England*
4 *Journal of Medicine* that we maintained. It was well
5 after this date. We did not have this. It was not in
6 the possession of Colgate, and, again, there was no
7 reason for us to have had this document. Ms. Scala was
8 not aware of it until it was presented to her at
9 deposition.

10 MR. MULARCZYK: And, yes, this was the subject
11 of the motion in limine.

12 THE COURT: How does this -- we made a ruling
13 on the motion in limine that there would not be
14 children dying of inhalation of talcum powder, of
15 aspiration of talcum powder. The motion -- the
16 objection is sustained for 3577.

17 The next one is 3578, which is Number 11.

18 MR. GARY SHARP: Again, National Safety
19 Council, Your Honor.

20 THE COURT: And it was -- and the witness was
21 emphatic that this was not received by Colgate.

22 MR. RIVAMONTE: I stand by my previous
23 arguments, Your Honor.

24 THE COURT: So that's sustained as well.

25 The next one is 3580, an article from *The New*

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1 *York Times*.
2 It's certainly relevant.
3 MR. GARY SHARP: Your Honor, we have no
4 objection.
5 THE COURT: All right. That one will be in
6 evidence.
7 (Whereupon, Plaintiff's Exhibit 3580 was
8 admitted into evidence.)
9 THE COURT: The next one after that is 3581,
10 which is -- corresponds to Number 14, which is -- which
11 are OSHA rules and regulations, which is -- it's the
12 law.
13 What would be your objection?
14 MR. GARY SHARP: Your Honor, with respect to
15 OSHA, I have no objection as long as the entire code
16 section is attached.
17 THE COURT: Now, this is...
18 MR. SATTERLEY: Well, wait a second. I would
19 object --
20 THE COURT: It's three pages long.
21 MR. SATTERLEY: I would object to them
22 putting --
23 THE COURT: Hold on.
24 The exhibit is the exhibit.
25 Do you have an objection to the way the exhibit

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1 exists at this point in time? Is it only part of an
2 exhibit that includes other relevant, pertinent
3 material?
4 MR. GARY SHARP: Your Honor, if we can meet and
5 confer with plaintiffs. The problem is the copy I have
6 I can't read it, and I think between us we should be
7 able to come up with a clean copy.
8 THE COURT: Maybe you should just let it go.
9 The jury won't be able to read it either.
10 MR. GARY SHARP: That is absolutely true and...
11 THE COURT: In any event, I don't mind letting
12 him talk about it, and if you want to get a cleaner
13 copy, Mr. Satterley, you can do that.
14 MR. GARY SHARP: Thank you, Your Honor.
15 THE COURT: The next one is 3582, corresponding
16 to Number 15. What's the objection to this?
17 MR. MULARCZYK: Hearsay, Your Honor. It's
18 just -- it's a report of finding by Dr. Lewin in
19 testing that he had done, so we object on the basis of
20 hearsay.
21 THE COURT: All right.
22 (Whereupon, Plaintiff's Exhibit 3582 was marked
23 for identification.)
24 MR. RIVAMONTE: Your Honor, this letter is
25 admissible under the hearsay rules. Number one, it's

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1 an ancient document. It's over 30 years old. In the
2 *ConAgra* case again, the authors of this document is
3 presumed to have known what they were talking about and
4 it's been typically relied upon. And, number two, it's
5 also admissible under the official -- the government
6 records hearsay exception because this was a document
7 drafted by the FDA and it's between two FDA employees.
8 So under, I believe it's 1271, it is admissible for
9 that purpose -- I'm sorry, 1280.
10 THE COURT: It wasn't drafted by the FDA. It
11 was directed to the FDA. It was drafted by Seymour
12 Lewin, a professor of chemistry someplace.
13 MR. RIVAMONTE: Let me check, Your Honor.
14 3583, Your Honor.
15 MR. SATTERLEY: No. 3582; right?
16 THE COURT: This is 3582.
17 MR. SATTERLEY: 3582. Exhibit 15.
18 Here it is.
19 MR. RIVAMONTE: So, Your Honor, this is also
20 admissible for notice purposes because this document
21 was produced by Colgate and it was in Colgate's
22 possession at the time.
23 THE COURT: It was produced by Colgate in
24 the --
25 MR. RIVAMONTE: Response to discovery,

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1 Your Honor.
2 THE COURT: All right. Is that right, that
3 Colgate had this document in their possession?
4 MR. MULARCZYK: No. Again, this is information
5 that was received during the course of depositions of
6 corporate -- corporate witnesses, so -- here's my --
7 Here's another take I have on this, Your Honor.
8 So there was a follow-up -- two follow-up
9 studies that were done, one by Dr. Lewin and one by the
10 FDA, on these exact same samples that they want to
11 introduce into evidence now.
12 So to the extent they're asking for this one to
13 be admitted, there are two follow-ups that say the
14 complete opposite in his final rulings that should be
15 admitted as well.
16 So to the extent that the Court is inclined, if
17 this comes in, then it certainly opens the door to all
18 of it, but our position -- the position we're
19 maintaining is that this was produced as part of
20 deposition transcripts when these documents were shown
21 to corporate representatives at depositions. What we
22 produced were the transcripts along with the exhibits
23 that were previously produced by plaintiffs. These
24 were not in possession of Colgate prior to that time.
25 So, in our view, that's the position we

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1 maintain, but -- leave it at that.
2 THE COURT: All right.
3 MR. SATTERLEY: I just want to verify. So it's
4 Colgate's position that, even though it's produced in
5 response to discovery with the Quinn Emanuel Bates
6 Number QECPC2, and it has several numbers, it's
7 Colgate's position that those Bates numbers don't mean
8 anything, and I just want to clarify that's Colgate's
9 position with regard to this because it was our
10 understanding that that came from the repository with
11 the Bates numbers on it. But now Colgate has taken a
12 new position I've never heard of before.
13 THE COURT: Well, I am just trying to figure it
14 out here. Did this...
15 MR. GARY SHARP: Your Honor.
16 THE COURT: Which is it?
17 MR. GARY SHARP: So, under discovery
18 obligations, a --
19 THE COURT: I understand that. The question
20 is --
21 MR. GARY SHARP: What we received in the course
22 of litigation these were not in the Colgate files.
23 These were received during the course of litigation by
24 counsel and then were attached to depositions where
25 people have been asked about them.

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1 THE COURT: All right. Mr. Satterley?
2 Mr. Satterley, did you receive this as a business
3 record or just one of those general "all documents that
4 you may have"?
5 MR. SATTERLEY: Well, Your Honor, they were
6 produced in response to our discovery and I -- you
7 know, it sounds like its Colgate's position that
8 there's no identifying marks or numbers or Bates
9 numbers that would demonstrate what they are. So we
10 believe that it's -- the one that I have -- I have one
11 with Bates numbers on them. His copy doesn't have
12 Bates numbers on them. Mine has Quinn Emanuel Bates
13 numbers on them.
14 MR. GARY SHARP: And, Your Honor, in the --
15 MR. SATTERLEY: So it's my -- other Colgate
16 counsel told me in the past that if it has the Quinn
17 Emanuel Bates numbers on it, it's part of their
18 repository, but it's now Colgate's taken the position,
19 that's fine. That just puts me on notice where they
20 are with regards to other documents, so.
21 THE COURT: All right. So I'm going to accept
22 as true that they did not have this document back in
23 1972.
24 MR. SATTERLEY: If we prove otherwise, we'll
25 bring it to the Court for reconsideration.

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1 THE COURT: All right. And so that one the
2 objection is sustained.
3 The next one is 3588, which corresponds to 21,
4 which is the CTFA minutes.
5 What's the objection to this?
6 MR. GARY SHARP: Your Honor, this is a CTFA
7 document. We're not going to challenge authenticity
8 because I'm assuming at some point somebody from the
9 CTFA has probably produced this. It was not a document
10 that was ever in the Colgate files. This document
11 actually came from Whittaker Clark & Daniels. We are
12 not challenging authenticity, though, however.
13 THE COURT: Wasn't the testimony that Colgate
14 was involved with this CTFA?
15 MR. GARY SHARP: Yes. Colgate was a member of
16 the CTFA. This happens to be something that Colgate
17 was not present at and there is no indication that this
18 document was ever sent to and/or received by Colgate.
19 MR. MULARCZYK: And, as a matter of course, we
20 stipulate on the CTFA documents where it indicates we
21 were present. We don't dispute those. The ones that
22 raise concern for us are the ones in which we weren't
23 present.
24 THE COURT: All right. I am persuaded that it
25 should be allowed in. So the objection is overruled.

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1 (Whereupon, Plaintiff's Exhibit 3588 was
2 received into evidence.)
3 The next one is 3590, which corresponds to 23.
4 MR. RIVAMONTE: This is another CTFA document,
5 Your Honor. It's a news release.
6 THE COURT: Is there an objection to this one?
7 MR. GARY SHARP: Other than your name is on it.
8 But no, Your Honor.
9 THE COURT: I also find that objectionable.
10 MR. GARY SHARP: Let the record reflect there
11 was laughter in the courtroom.
12 THE COURT: That one will be in evidence.
13 (Whereupon, Plaintiff's Exhibit 3590 was
14 received into evidence.)
15 THE COURT: The next one is 3592. The Sinai
16 study.
17 What's the objection to this one?
18 MR. MULARCZYK: Same thing as for Dr. Lewin.
19 It's hearsay.
20 MR. SATTERLEY: Well, Your Honor, this is --
21 this goes to notice, exception to the hearsay rule,
22 issue of notice. This is a published study regarding
23 the very product at issue in this case, that the
24 corporate representative admitted that they knew that
25 it was going on at the time, and this, at the very

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1 least, should come in for the issue of notice.
2 MR. RIVAMONTE: Similar to *The New York Times*
3 article, Your Honor. This is a publication in a
4 medical journal -- or a scientific journal, I should
5 say.
6 MR. SATTERLEY: *Journal of Toxicology and*
7 *Environmental Health*.
8 THE COURT: It's really a question of whether
9 they had notice at the time, and I'm persuaded that
10 they had notice at the time.
11 MR. GARY SHARP: Your Honor, if I might, this
12 is similar to every medical article which might come up
13 in a trial with respect to medical, and they're
14 referred to, certainly. They're quoted from. They
15 don't come into evidence because they're still
16 inadmissible hearsay.
17 THE COURT: I don't disagree with that, but the
18 distinguishing factor is that with the Sinai group it
19 was a *New York Times* article and then there was
20 interaction between the industry group and the people
21 who wrote the article.
22 MR. GARY SHARP: Certainly.
23 THE COURT: And that's where it distinguishes
24 this, that it was a bone of contention and it was
25 maneuvering, if you will, around what was -- what was

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1 printed.
2 MR. GARY SHARP: Well, again, Your Honor, what
3 we're doing is we're now sending back to the jury room
4 to lay people medical or scientific articles that have
5 been testified to by the experts and have been
6 explained by the experts. We don't send the textbooks
7 or the articles back to the jury room.
8 THE COURT: I agree with that. This isn't one
9 of those.
10 MR. GARY SHARP: Thank you, Your Honor.
11 THE COURT: This is something that was
12 published, that the industry group addressed it. And
13 it's the fact that the industry group addressed it that
14 makes it what's in there. And it is hearsay, no
15 question about it. But it goes to notice, not to the
16 truth of the matter.
17 MR. GARY SHARP: Thank you, Your Honor.
18 THE COURT: So that's 3592 -- and, actually,
19 3593 can both be admitted into evidence, because I'm
20 going to presume that it is the same.
21 (Whereupon, Plaintiff's Exhibit 3592 was marked
22 for identification.)
23 (Whereupon, Plaintiff's Exhibit 3593 was
24 received into evidence.)
25 MR. GARY SHARP: And that's for notice only;

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1 correct, Your Honor?
2 THE COURT: The next one is 3594, which is 27.
3 MR. MULARCZYK: So the objection to this,
4 Your Honor, it is hearsay within hearsay. It's a
5 document that purports to describe a telephone
6 conversation.
7 MR. GARY SHARP: Again, it's not a Colgate
8 document and it's never appeared in the Colgate files.
9 THE COURT: We have somebody, looks like it's
10 named Shapiro, and we have Langer. Beyond a doubt,
11 it's a hearsay document; right?
12 MR. RIVAMONTE: Your Honor, in our trial brief
13 we submitted a declaration from the custodian of
14 records from the FDA, and that declaration
15 authenticates this document, number one; and, number
16 two, confirms that this document was kept in the
17 regular course of the FDA.
18 So in that sense, Your Honor, it's admissible
19 as a business record, under the business record
20 exception. It's also --
21 THE COURT: This is a government record?
22 MR. RIVAMONTE: It is maintained as a
23 government record, yes, Your Honor. It's part of the
24 FDA files as a declaration from the FDA. It's attached
25 as an exhibit.

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1 THE COURT: So it's an FDA business record.
2 MR. RIVAMONTE: Yes. It was kept in the
3 regular course of the FDA's business.
4 THE COURT: Where is the evidence that shows
5 that?
6 MR. RIVAMONTE: Let me look it up, Your Honor.
7 MR. SATTERLEY: The declaration we submitted, I
8 believe.
9 MR. RIVAMONTE: It was part of the trial brief.
10 It was in my declaration. I will give you the exact
11 exhibit number.
12 THE COURT: All right. If it's a business
13 record and it's been authenticated by a declaration.
14 MR. MULARCZYK: Well, it seems like that only
15 addresses the first layer of hearsay and not the
16 underlying telephonic conversation. The business
17 record exception is that it actually exists only
18 applies to the document itself. It doesn't apply to
19 the second layer of hearsay within the document which
20 describes the underlying telephonic conversation, which
21 is actually the title of the document itself.
22 MR. RIVAMONTE: Your Honor, just for the
23 record, it's Exhibit V as in Victor to my declaration.
24 It is a declaration of Tobin Ballinger, and in that
25 declaration, in that Exhibit B, there is an

1 authentication page by the FDA certifying that this
2 document, along with others, is part of -- maintained
3 in the regular course of the FDA's business.

4 In terms of the --

5 THE COURT: You didn't -- did you subpoena the
6 document to court and -- with the declaration by the
7 custodian?

8 MR. RIVAMONTE: It was a FOIA request done by
9 my office and when the request was made --

10 THE COURT: All right. So it's a Freedom of
11 Information Act request and they sent it back saying
12 these are the documents we have.

13 MR. RIVAMONTE: Yes, Your Honor.

14 THE COURT: That's insufficient to authenticate
15 it. If you have a declaration of a custodian as would
16 come with documents that were subpoenaed to the Court
17 for trial, that would take care of the problem in terms
18 of authentication.

19 And that they also say that it's made in the
20 regular course and scope of business with the other
21 necessary assertions, it can get past the hearsay
22 objection. But it -- but I'm going to sustain the
23 objection on this one. I don't see that having
24 occurred.

25 The next one is 3595, which is the submission

1 to the FDA.

2 MR. MULARCZYK: So, again, our objection to
3 this is authenticity.

4 THE COURT: How many pages are on this one?

5 MR. RIVAMONTE: It consists of two documents,
6 Your Honor. I think we only want -- it's kind of weird
7 because in the copy, as you'll see, there's one --
8 there's two documents per page.

9 THE COURT: Yes. I have four documents
10 altogether plus a page that does not make sense to me.
11 It says "remote user." That's right. Remote user.

12 MR. RIVAMONTE: So, Your Honor, we want the
13 McCrone document, which is dated March 12, 1976.
14 That's two pages.

15 And then we want the Johnson & Johnson --

16 THE COURT: Well. All right.

17 MR. RIVAMONTE: There's three documents total,
18 total of four pages.

19 THE COURT: There has been testimony that these
20 were the documents that were sent by the trade group,
21 the CTFA, in order to influence the FDA; isn't that
22 what the testimony was?

23 MR. MULARCZYK: I don't recall that testimony,
24 Your Honor. And I would -- one is a Johnson & Johnson
25 document. One is a McCrone document that wasn't a

1 communication with Colgate. I think we have challenges
2 to authenticity as to both. We have challenges to
3 hearsay as to both. And I believe one of the documents
4 actually discusses a -- the McCrone document also seems
5 to reference a verbal agreement that was made, so
6 there's a multiple hearsay layer issue with respect to
7 the McCrone document.

8 THE COURT: Well, my recollection of testimony,
9 and I'm blanking out at the moment as to who gave the
10 testimony, was that the trade group put together a
11 package of letters regarding the incorrect assertions
12 in the Sinai Medical School study and it was sent to
13 the FDA. But maybe I'm not correct about that.

14 MR. SATTERLEY: I think you're correct. Diana
15 Scala testified about that. And also there's testimony
16 that hadn't already been played from Mr. Hopkins on
17 that -- in that regard.

18 THE COURT: Maybe it was Mr. Hopkins'
19 testimony. I don't remember exactly whose testimony it
20 was. But that's my recollection. And if that's --
21 if -- with that testimony underpinning this, I will
22 admit it into evidence.

23 The next one is 3596, the CTFA minutes.

24 MR. MULARCZYK: Your Honor, just as a
25 clarification on the last one, which document are you

1 admitting? Or subject to the testimony, because
2 there's a few in there.

3 THE COURT: There's -- there are three letters.

4 MR. MULARCZYK: Okay.

5 THE COURT: And one of them is from Johnson &
6 Johnson, one of them is from McCrone, and one of them
7 is from Sterling Drug. And the other page that says
8 "remote user," I don't know what that means.

9 Mr. Satterley?

10 MR. MULARCZYK: It has a little note --

11 MR. SATTERLEY: We don't need that.

12 MR. MULARCZYK: I think that's a little note
13 left by the plaintiff's attorney.

14 MR. SATTERLEY: I don't, but we don't -- we
15 won't seek the admission of that, Your Honor.

16 THE COURT: All right. We're going to tear
17 that out.

18 MR. MULARCZYK: Just like that.

19 THE COURT: Just like that. All right.

20 MR. MULARCZYK: We'll -- and we'll -- we'll
21 check the -- we'll go back and check the testimony
22 that's underpinning the admission of these, and -- and
23 we'll circle back with the Court in the morning.

24 THE COURT: All right. 3596, CTFA minutes. If
25 you have no different objections, I'm going to admit

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1 that.

2 MR. GARY SHARP: Your Honor, what tab? I'm

3 sorry.

4 MR. SATTERLEY: 29, Mr. Simko. Colgate was

5 present, so --

6 MR. MULARCZYK: Yeah, we'll withdraw the

7 objection.

8 THE COURT: All right. That one will be in.

9 (Whereupon, Plaintiff's Exhibit 3596 was

10 received into evidence.)

11 THE COURT: The next one as well? 3597, which

12 is 30, which -- oh, maybe I'm confusing the letters.

13 MR. GARY SHARP: Yes. I -- now -- now that I

14 see this, I -- I believe that is what happened,

15 Your Honor.

16 MR. SATTERLEY: Yeah. This is the -- this is

17 the March submission to the FDA enclosing all the

18 industry members of the CTFA, and there was

19 testimony -- specific testimony about this, about

20 Christopher Costello working for Colgate.

21 THE COURT: These are the same letters as in --

22 except there's more of them here.

23 MR. SATTERLEY: That's correct.

24 MR. MULARCZYK: Can I -- can I get back to the

25 Court on this in the morning again, just review the

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1 testimony?

2 THE COURT: All right. Is there one from

3 Colgate?

4 MR. SATTERLEY: There's -- I have one --

5 there's a -- a letter and an internal -- a memo that

6 was submitted to the FDA; March 15, 1976, letter from

7 Costello to Norman Estrin, and Norman Estrin turns

8 around and submits all of this to the FDA.

9 MR. GARY SHARP: And, Your Honor, no objection

10 to those portions.

11 THE COURT: Well, the document is what the

12 document is. If you have objections to other portions,

13 we are going to deal with it, but first, let me do

14 this.

15 3595 I'm going to strike from being admitted

16 into evidence, because it's going to be duplicated

17 3597. So 3595 is out because it's a duplication.

18 3597 will be in, but the Court will reconsider

19 it if Mr. Mularczyk can find some evidence that nobody

20 talked about it.

21 (Whereupon, Plaintiff's Exhibit 3597 was

22 received into evidence.)

23 MR. MULARCZYK: I'm not -- I'm not looking for

24 a way out. I just want to confirm what the --

25 THE COURT: All right. The next one is 3599,

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1 Exhibit Number 32. It's a memorandum from HEW,

2 somebody there, to Robert Schaffner.

3 MR. GARY SHARP: Yes, Your Honor. Again, this

4 is an internal FDA document that has not been

5 authenticated.

6 MR. MULARCZYK: We object on that and on

7 hearsay.

8 MR. RIVAMONTE: Your Honor, this is one of the

9 documents that the FDA produced in response our FOIA

10 request. It's Exhibit V, as in Victor, to my

11 declaration in the trial brief.

12 THE COURT: Yeah. I think it's -- I don't

13 remember what the witness, Diana Scala, said about it.

14 Do you?

15 MR. GARY SHARP: It was just read to her,

16 Your Honor.

17 THE COURT: All right. It's not in evidence.

18 Then we have 3600, which is 33.

19 MR. GARY SHARP: Yes, Your Honor. In this --

20 this next series are allegedly to be call reports

21 that -- they're Cyprus documents. They are not Colgate

22 documents. They did not appear in Colgate files.

23 THE COURT: Well, the testimony, if I recall,

24 is that the witness said that Cyprus mailed these

25 things in an offer -- in attempting to solicit business

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1 from Colgate.

2 MR. GARY SHARP: No. Let me rephrase that,

3 Your Honor.

4 The testimony from Ms. Scala was -- again,

5 these were simply put in front of her, and she was --

6 they were read to her. These are -- nothing with

7 respect to Colgate or Colgate employees would verify

8 anything that's in this document from Cyprus.

9 And, again, this is a hearsay within hearsay,

10 because they purport to be conversations that took

11 place by a gentleman at Cyprus, who, apparently, was in

12 sales, and they've memorandums to his boss at the time

13 that they were attempting, apparently, to gain

14 Colgate's business, which they were not able to do

15 until they bought the company.

16 MR. SATTERLEY: Your Honor, first of all, many

17 of these documents have statements of what Colgate

18 personnel managers said. Those would be party

19 admissions, the portions of the documents. The

20 documents themselves have been authenticated --

21 THE COURT: They would be party admissions if

22 somebody was standing here to testify that "They told

23 me."

24 But what we have is a document that was written

25 a long time ago, and the witness that talked about the

1 document, if at all, doesn't say that "Somebody told
2 me."
3 MR. SATTERLEY: These --
4 THE COURT: That's a difficult problem from the
5 perspective of saying that it's a -- it's an admission.
6 MR. SATTERLEY: These documents were all
7 produced as business records by Cyprus. We have
8 testimony from the Cyprus corporate representative we
9 could tender -- tender to Your -- to Your Honor, if we
10 haven't already done so.
11 MR. RIVAMONTE: We have.
12 MR. SATTERLEY: And so these are business
13 records from 19 -- this one is from 1976, and so we can
14 authenticate these as business records, and there are
15 statements of -- of a party within the business record.
16 And it would be just -- if they had a record of
17 Ms. Schmitz --
18 THE COURT: I don't have a problem with this
19 being a business record, but I need to see the evidence
20 from Cyprus that describes it as their business record.
21 MR. SATTERLEY: We -- we provide will that to
22 Your Honor.
23 MR. RIVAMONTE: Exhibit BB to my declaration,
24 Your Honor, is the deposition testimony of Henry
25 Mulryan, who was a -- who -- who worked for Cyprus and

1 has personal knowledge about how these call reports are
2 generated in the normal course of Cyprus's business.
3 MR. SATTERLEY: He was -- the president of
4 Cyprus was deposed. And also, if Your Honor will --
5 may recall, his/he's the signator of one of the other
6 letters that --
7 THE COURT: Are you going to read that to
8 the -- read that information to the jury because this
9 guy is unavailable?
10 MR. SATTERLEY: We have designated
11 Mr. Mulryan's deposition. If the Court requires it for
12 foundation purposes, we certainly would.
13 First, I think that its authentication as a
14 business record, as a preliminary matter, the Court
15 can -- can take that and determine itself that it's a
16 business record and otherwise admissible.
17 But if the Court requires us to read that
18 portion of Mr. Mr. Mulryan's testimony, we certainly
19 can do that, if -- if need be.
20 MR. MULARCZYK: I think Your Honor is still
21 going to run into the same problem, because it's not
22 going to be Mr. Mulryan saying, "This is what Colgate
23 told me."
24 THE COURT: No, no, no. But if he identifies
25 the document as being a business record for Cyprus,

1 authenticates that, that's an exception to the hearsay
2 rule.
3 MR. MULARCZYK: But the statement is being
4 made --
5 MR. GARY SHARP: Your Honor, the statement
6 contained within this record is something the
7 plaintiffs wish to -- to show to prove the truth of the
8 matter asserted. So it is the hearsay statement within
9 the document that is the objection.
10 I -- again, I'm not going to force them to read
11 a transcript for authentication. I believe these
12 are -- probably purport to be Cyprus documents. I have
13 no reason to believe that someone has done something to
14 them.
15 It's the hearsay statements within those Cyprus
16 documents that -- that we're placing our objection,
17 because they -- it's a salesperson, who is trying to
18 get something to his boss to convince him to allow
19 making calls on Colgate that, apparently, are taking
20 hours and -- and lunches.
21 THE COURT: Well --
22 MR. GARY SHARP: They are seeking to have those
23 statements made by Colgate employees, allegedly, on a
24 third-hand basis as something to prove the truth of the
25 matter asserted.

1 MR. RIVAMONTE: Your Honor, if you look at the
2 recipient, who are -- who are -- the persons who took
3 part in this three-hour lunch in April 19, 1976 --
4 THE COURT: I -- I -- I saw that.
5 MR. RIVAMONTE: Yeah, Mr. Simko is in there.
6 So Colgate employees were --
7 THE COURT: My ruling is going to be that if we
8 can see that these are Cyprus -- genuinely business
9 records, then I will admit them into evidence.
10 If they're not, the -- the other objection that
11 it's a hearsay document or a double hearsay document is
12 one that goes to something else. I mean, hearsay
13 doesn't apply if there is an exception to the hearsay
14 rule. Hearsay within hearsay, we can give them a
15 limiting instruction, if we need to.
16 But -- so that would mean that 3600, 3601, 3603
17 are all in. And 3604 as well.
18 (Whereupon, Plaintiff's Exhibit 3600 was
19 received into evidence.)
20 (Whereupon, Plaintiff's Exhibit 3601 was
21 received into evidence.)
22 (Whereupon, Plaintiff's Exhibit 3603 was
23 received into evidence.)
24 (Whereupon, Plaintiff's Exhibit 3604 was
25 received into evidence.)

1 MR. GARY SHARP: And, Your Honor, we'll --
2 we'll draft proposed limiting instruction for the
3 Court.
4 THE COURT: I -- I have one that sort of aims
5 in this direction, and we can talk about it. Let's
6 finish this first, though.
7 MR. GARY SHARP: Thank you, Your Honor.
8 THE COURT: I also wanted to do one other
9 thing, is that counsel need not request leave of Court
10 to approach the witness every single time.
11 If you want to make the record clear, just say,
12 "I'm going to show you this document, Mr. Witness," and
13 then just --
14 MR. GARY SHARP: Thank you, Your Honor.
15 MR. SATTERLEY: We appreciate it, Your Honor.
16 MS. CLANCY: And then don't do it in a menacing
17 fashion. And then don't approach in a menacing
18 fashion.
19 THE COURT: Well, now I'm going -- I'm not
20 worried about that in this case.
21 Okay. So 3600, in; 3601, in; 3603, in; 3604,
22 that's also going to be in; 3605 -- 3611, which is
23 Number 44 --
24 MR. RIVAMONTE: It's the one with Mr. Roach.
25 THE COURT: Pardon?

1 MR. RIVAMONTE: The one you mentioned earlier
2 this morning.
3 THE COURT: Oh, no, no, no. That's -- that's
4 not spelled like me. The other one --
5 MR. RIVAMONTE: Oh, the other one.
6 THE COURT: It's 3590 --
7 MR. RIVAMONTE: Oh, okay.
8 THE COURT: -- has printing in the upper
9 right-hand corner that looks, strangely, like mine with
10 the name F. Roesch, R-o-e-s-c-h, which is how you spell
11 my name. It's an unusual spelling. It's not real
12 common. But I'm not related.
13 Okay. Let's move on.
14 MR. SATTERLEY: Colgate did have a facility in
15 Berkeley, Your Honor.
16 THE COURT: Okay. So we have the -- this
17 McCrone document with a picture on it that's --
18 MR. GARY SHARP: Which tab are we at,
19 Your Honor? Which tab?
20 THE COURT: This is 44. It's a letter directed
21 to Ms. Grace Roach of the Colgate-Palmolive Company --
22 MR. SATTERLEY: I thought we agreed --
23 THE COURT: -- July 1983.
24 MR. SATTERLEY: I thought, Mr. Sharp --
25 MR. GARY SHARP: Yeah.

1 MR. SATTERLEY: -- you -- you agreed to this
2 one; right?
3 MR. GARY SHARP: Yes.
4 THE COURT: All right. So that one will be in
5 evidence.
6 And that -- that completes that.
7 MS. CLANCY: That completes all the Scala
8 exhibits, Your Honor.
9 THE COURT: All right.
10 THE REPORTER: What -- what was Number 44 that
11 you just admitted? Was that 36- --
12 THE COURT: 3611.
13 MR. SATTERLEY: A letter from McCrone to
14 Ms. Grace Roach.
15 THE REPORTER: Okay. Thanks.
16 MS. CLANCY: Oh, Your Honor, may I just -- to
17 help the -- to assist the court reporter and the
18 Clerk -- I gave Mr. Satterley the wrong exhibit number
19 today on something. I just need to read it into the
20 record. I told him one of the exhibits that was
21 admitted was 727, but the actual exhibit number is
22 3591.
23 THE COURT: Okay.
24 MR. SATTERLEY: There was no objection at the
25 time, so I just rocked and rolled.

1 THE COURT: Mr. Bir? Mr. Bir --
2 THE CLERK: Yes?
3 THE COURT: -- we are going to admit another
4 exhibit here.
5 MS. CLANCY: It was already admitted.
6 THE COURT: Oh, it was already admitted?
7 MS. CLANCY: I just read the --
8 THE COURT: So we need to delete one.
9 MS. CLANCY: When he said, "I'm now showing you
10 727," that's because I gave him the wrong sticky.
11 THE COURT: So -- all right. So both of those
12 are in evidence. They're just different documents?
13 MS. CLANCY: No. 727 is not evidence. It's
14 3591. And I had some sort of --
15 MR. SATTERLEY: It's the same document, though.
16 MS. CLANCY: It's the same, yeah.
17 MR. SATTERLEY: It's the J4-1 method; right?
18 MS. CLANCY: Yes.
19 It's the same document. I gave him the wrong
20 document number.
21 THE COURT: Okay.
22 MS. CLANCY: So I didn't want there to be
23 any -- I've made more confusion --
24 THE COURT: Well, now, I'm easily confused.
25 Okay. I have a -- a limited -- evidence

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1 admitted for limited purpose instruction that -- I'll
2 just show it to you. And if you -- if you want to --
3 MR. SATTERLEY: Can we get a copy, by chance,
4 Your Honor, or --
5 THE COURT: All right. Is there anything else
6 we need to talk about before we let the reporter go
7 home?
8 MR. SATTERLEY: The only thing is, there was
9 some evidentiary rulings Your Honor made -- evidentiary
10 rulings Your Honor made, I believe, regarding some
11 additional J&J documents, and earlier, I had requested
12 that they be received into evidence.
13 When I did that, it was at a break, and I
14 didn't hear Your Honor respond, "Okay, those are
15 received into evidence," like you did yesterday.
16 This morning you issued a ruling. It
17 was the --
18 THE COURT: What numbers are you talking about?
19 MR. SATTERLEY: These are Exhibit 4687, 0790,
20 407 --
21 THE COURT: Wait.
22 MR. SATTERLEY: And I'm reading from
23 Your Honor's order.
24 THE COURT: 4687?
25 MR. SATTERLEY: 4687, yes, Your Honor.

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1 THE COURT: That's in evidence.
2 MR. SATTERLEY: Yes. The -- so -- so I guess
3 the question is, I have a list here that Your Honor
4 signed yesterday --
5 THE COURT: Well, my Clerk is on the job.
6 MR. SATTERLEY: Okay.
7 THE COURT: If I signed that order, he put them
8 into evidence.
9 MR. SATTERLEY: Okay. That's all I wanted to
10 make sure.
11 THE COURT: And I'm looking at the list of
12 documents that the Clerk has as in evidence, and 4687
13 is there.
14 MR. SATTERLEY: Okay.
15 THE COURT: So I think that if we use that as
16 an exemplar, you are going to be fine.
17 MR. SATTERLEY: I was just making sure the
18 court reporter has it reflected on the transcript.
19 THE COURT: All right.
20 MR. SATTERLEY: Thank you, Your Honor.
21 MS. STEINMANN: Your Honor, what time would you
22 like us back tomorrow?
23 THE COURT: 9:00.
24 MR. SATTERLEY: And one last thing, because
25 Dr. Longo will be going in the morning, I'm going to

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1 meet and confer with defense counsel. Dr. Horn, I may
2 have to move him to either Thursday or Monday. I'll
3 send an email to counsel to let -- let them know about
4 that.
5 THE COURT: All right. We're in recess.
6 (Whereupon, Plaintiff's Exhibit 4687 was
7 received into evidence.)
8 (Whereupon, Plaintiff's Exhibit 790 was
9 received into evidence.)
10 (Whereupon, Plaintiff's Exhibit 407 was
11 received into evidence.)
12 (Whereupon, Plaintiff's Exhibit 670 was
13 received into evidence.)
14 (Whereupon, Plaintiff's Exhibit 679 was
15 received into evidence.)
16 (Whereupon, Plaintiff's Exhibit 3014 was
17 received into evidence.)
18 (Whereupon, Plaintiff's Exhibit 3088 was
19 received into evidence.)
20 (Whereupon, Plaintiff's Exhibit 5917 was
21 received into evidence.)
22 (Whereupon, Plaintiff's Exhibit 3573 was marked
23 for identification.)
24 (Whereupon, Plaintiff's Exhibit 3574 was marked
25 for identification.)

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1 (Whereupon, Plaintiff's Exhibit 3577 was marked
2 for identification.)
3 (Whereupon, Plaintiff's Exhibit 3578 was marked
4 for identification.)
5 (Whereupon, Plaintiff's Exhibit 3581 was marked
6 for identification.)
7 (Whereupon, Plaintiff's Exhibit 3594 was marked
8 for identification.)
9 (Whereupon, Plaintiff's Exhibit 3595 was marked
10 for identification.)
11 (Whereupon, Plaintiff's Exhibit 3599 was marked
12 for identification.)
13
14 (Whereupon, the proceedings
15 were concluded at 5:25 p.m.)
16
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18
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1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF ALAMEDA)
4

5 I, EARLY K. LANGLEY, do hereby certify:

6 That foregoing proceedings were held in the
7 above-entitled action at the time and place therein
8 specified;

9 That said proceedings were taken before me at said
10 time and place, and was taken down in shorthand by me,
11 a Certified Shorthand Reporter of the State of
12 California, and was thereafter transcribed into
13 typewriting, and that the foregoing transcript
14 constitutes a full, true and correct report of said
15 proceedings that took place;

16 IN WITNESS WHEREOF, I have hereunder subscribed my
17 hand on April 30, 2019.

18

19

20

21

22

23

24

25

EARLY K. LANGLEY, CSR No. 3537
State of California

Exhibit 84

1	State of South Carolina	In the Court of Common Pleas
2	County of Hampton	
3	JAMES COLEMAN SIZEMORE, as)
4	Personal Representative of)
5	The Estate of JAMES CALVIN)
6	SIZEMORE, Deceased,)
7	Plaintiff,) 2016-CP-25-00440
8	-vs-)
9	BOWATER PAPER MILL, et al.,)
10	Defendants.)
11	County of Richland)
12	BETH-ANEE F. JOHNSON and)
13	JOHN W. GREENLEY, JR.,)
14	Plaintiffs,) 2018-CP-40-01781
15	-vs-)
16	JOHNSON & JOHNSON, et al.,)
17	Defendants.)
18	County of Richland)
19	CHARLES T. HOPPER and)
20	REBECCA HOPPER,)
21	Plaintiffs,) 2019-CP-40-00076
22	-vs-)
23	AIR & LIQUID SYSTEMS) May 7, 2019
24	CORPORATION, et al.,) TRANSCRIPT OF RECORD
25	Defendants.) PRETRIAL MOTIONS

1 B E F O R E:

2 **Chief Justice Jean Toal (Ret.)**, Supreme Court
Acting Circuit Court Judge

5 A P P E A R A N C E S:

6 Theile B. McVey, Esquire
Jonathan M. Holder, Esquire
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Attorneys for Plaintiffs Sizemore and Hopper

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9 Nathan Finch, Esquire
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10 and Johnson W. Greenley, Jr.

11 Yancey A. McLeod, III, Esquire
Attorney for Defendant Waste Management

12 Phillip C. Reid, Esquire
13 Attorney for Defendant Crosby Valve, Inc.

14 Louis P. Hems, Esquire
Matthew R. Schroll, Esquire
15 Attorneys for Defendant Johnson & Johnson

16 Jennifer M. Techman, Esquire
Attorney for Defendant Lincoln Electric and Hobart
17 Brothers and others

18 Allyson Twilley, Esquire
Attorney for Defendant Shell Oil Company

19 Robert O. Meriwether, Esquire
20 Attorney for Defendant Air & Liquid Systems and others

21 Ashley Brathwaite, Esquire
Attorney for Defendant Covil Corporation

22
23
24
25 Reported by:
Diane L. Marcengill, RPR, CRR, CRC
Circuit Court Reporter

<u>Witnesses</u>	<u>I N D E X</u>	<u>Page</u>
Sizemore Case		1, 138
J&J Case		17
Hopper Case		184

E x h i b i t s

For Plaintiff Beth-Anee Johnson:

<u>Marked</u>	<u>Description</u>	<u>I.D.</u>	<u>Admitted</u>
1	List of preadmitted exhibits	128	

For the Defendants:

<u>Marked</u>	<u>Description</u>	<u>I.D.</u>	<u>Admitted</u>
	None offered.		

1 (WHEREUPON, court convened with all parties
2 present and the following proceedings were had
3 commencing at 9:11 a.m.)

4 THE COURT: Crosby's motion for summary judgment.
5 Mr. Reid.

6 MR. REID: Thank you, your Honor. Good morning.

7 THE COURT: Good morning.

8 MR. REID: Your Honor, I think our motions for
9 summary judgment can be defined as one governed by the
10 Henderson case and Lorman case.

11 There is no exposure evidence against Crosby, and
12 Crosby is therefore entitled to summary judgment.

13 Mr. Sizemore was deposed twice in a 1999 case and
14 over ten days in a Louisiana case that was a
15 predecessor to this one in 2016. And the entirety of
16 what he said about Crosby was that he didn't remember
17 working with Crosby valves.

18 On top of that, there is no coworker testimony in
19 this case that any work was done by Mr. Sizemore on or
20 near a Crosby valve or near others who worked on a
21 Crosby valve.

22 Nothing the plaintiffs have submitted with their
23 brief creates any genuine issue of material fact for
24 trial. They have submitted to your Honor three
25 documents relating to three sites.

1 One is Ocone, where Mr. Sizemore stopped working
2 in 1972. In his deposition, he said he thought he had
3 insulation and gasket exposure at Ocone but did not
4 even generically say what sort of equipment or place
5 that that exposure took place. And we know from his
6 deposition that he did a lot of pipefitting, joining
7 pipes to other sections of pipe.

8 In addition to Mr. Sizemore's own testimony, they
9 have submitted testimony from two other gentlemen who I
10 am loath to describe as coworkers because they didn't
11 know Mr. Sizemore; rather, they also worked at Ocone
12 but in very different circumstances.

13 One is Steve Simpson. Mr. Simpson didn't begin at
14 Ocone until 1977, five years after Mr. Sizemore
15 departed that site. He never mentioned Mr. Sizemore in
16 his deposition.

17 And if the Court looks at page 297 to 298 of his
18 deposition, Mr. Simpson said he could not remember
19 working on or seeing anyone else work on a Crosby
20 valve. So that amounts to no evidence.

21 The other gentleman who worked at Ocone whose
22 testimony they have submitted is Mr. Taylor, who also
23 never mentioned Mr. Sizemore. Mr. Taylor started there
24 in 1972, so I suppose there's some potential for
25 overlap. But most importantly, Mr. Taylor said that

1 since Ocone was in a startup phase, there wasn't any
2 gasket or packing work performed in 1972.

3 There is also in the records submitted by the
4 plaintiffs some Crosby documents related to Florida
5 Power & Light. Crosby sold 13 valves each to five
6 different Florida Power & Light sites. Two of those 65
7 valves had asbestos, both at Sanford.

8 If the Court looks at Mr. Sizemore's deposition
9 testimony about Sanford, he never even mentions valves
10 at all, much less relief valves or Crosby relief
11 valves.

12 The third site on which they submitted some
13 documents is Fort Howard, a paper mill in Wisconsin.
14 And, specifically, what the plaintiffs have submitted
15 is a 1952 purchase order for four valves costing \$8. I
16 think that tells you something about the size of the
17 valves.

18 There's nothing in that purchase order suggesting
19 those valves had any asbestos on them. And while the
20 plaintiffs informed the Court that Mr. Sizemore worked
21 at that plant, they don't point out that he wasn't
22 there until 1986, 34 years after that purchase order
23 came out. So we don't know where those valves went, if
24 they were still there, if they were even in the same
25 building that Mr. Sizemore worked three and a half

1 decades later.

2 So, in short, I would ask the Court to consider a
3 quote from Lorman. The Court said: Appellants would
4 have us adopt a rule that if a plaintiff can present
5 any evidence that a company's asbestos-containing
6 product was at the workplace while the plaintiff was at
7 the workplace, a jury question has been established.

8 Lorman rejected that proposition and granted
9 summary judgment. The Court should here as well
10 because on this record, it would require speculation to
11 think that there could be any exposure that
12 Mr. Sizemore may have had to Crosby products.

13 So, for that reason, we move for summary judgment.

14 And as the Court knows, we also have a pending
15 motion on personal jurisdiction, and, of course --

16 THE COURT: I thought I had dealt with that,
17 Mr. Reid. Have I not?

18 MR. REID: Not in this case. I was here last
19 October. I think we had a hearing in the Nolan case on
20 that issue.

21 THE COURT: Uh-huh.

22 MR. REID: The contention in the plaintiff's brief
23 here is not that there's general jurisdiction but
24 rather specific jurisdiction.

25 I think it's clear from the U.S. Supreme Court

1 case we have cited in our brief that to establish
2 personal jurisdiction, they have to demonstrate that
3 there was Crosby product in this state, activity by
4 Crosby directed to the state that actually caused the
5 injury. For the very reasons I've cited about their
6 lack of evidence at Ocone, I think the Court is duty
7 bound to grant us that motion as well.

8 So I'll respond to any questions the Court may
9 have and may want to respond to the plaintiff's
10 argument, but that's it.

11 THE COURT: All right, sir. I'll go on and hear
12 from plaintiff, and you will certainly have a chance in
13 reply.

14 Mr. Branham.

15 MR. BRANHAM: Good morning, your Honor. Nice to
16 see you again.

17 THE COURT: Thank you. Same here.

18 MR. BRANHAM: Your Honor, as Mr. Reid said,
19 Mr. Sizemore was deposed twice in a 1999 case and then
20 over a course of, I believe it was, ten volumes in the
21 instant case.

22 And the one thing that is crystal clear from
23 Mr. Sizemore's testimony, both then and in this case,
24 is that he was an expert on boilers. All he did for
25 30 years was work on boilers and associated systems.

1 He knew more about boilers than any client I've ever
2 had. He was flown all over the country to handle
3 boilers.

4 Crosby's valves, the type that we're talking about
5 in this case, go on boilers. They're safety relief
6 valves. They are designed to relieve pressure when it
7 becomes too high.

8 What Mr. Sizemore said in his 2001 deposition at
9 page 67 when he was asked about boiler inspections and
10 whether he did those, and he repeatedly talked about
11 that, and he says down at the very last sentence at
12 line 18 through 20: And normally they would check or
13 replace the relief valves on the steam drum.

14 That's what we're talking about, relief valves on
15 steam drums. That's where they go. And so I agree
16 with Mr. Reid that he didn't say Crosby. He didn't.
17 And that's not any great surprise because they're
18 covered in asbestos, right? You don't see the name on
19 them. But he sure knew he was working on them.

20 So when you combine that with the fact that Crosby
21 sold not only to Ocone, but, according to their own
22 documents, they sold to Celanese, Diamond Shamrock,
23 Dupont, Exxon, Farmland, Fluor, Fiber Industries, Hurst
24 (phonetic) Fibers, Hercules, Marathon, PPG,
25 Westinghouse.

1 I didn't read them all off, but the ones I just
2 read are places Mr. Sizemore testified he worked.

3 THE COURT: And many of them in South Carolina.

4 MR. BRANHAM: Yes, your Honor.

5 So as your Honor knows, these cases are hard
6 because you are going back 50-some-odd years to connect
7 the dots. But that's exactly what we've done here.

8 Mr. Sizemore worked on boilers that had these
9 valves, and he specifically talks about doing boiler
10 inspections on these types of valves. The only
11 evidence -- the only evidence in this case is valves
12 sold by Crosby or manufactured by Crosby. So when you
13 put all of those things together, you have in fact
14 connected the dots.

15 And so both on the issue of personal jurisdiction,
16 we meet that test in terms of the frequency, proximity.
17 He's talked about working on these types of valves, and
18 he talked about now he normally did it, which certainly
19 infers frequency. And given his general testimony
20 about boiler work over the course of 50 years, I think
21 he more than surpasses the Henderson and Lorman
22 requirements, and for those reasons, I think you should
23 deny summary judgment.

24 THE COURT: Just so the record is clear -- and we
25 have all tried these cases a number of times now with

1 each other, but so the record in this particular case
2 is clear, Crosby valves are very specialty valves, and
3 they are, for the most part, safety release valves on
4 boilers or other steam-generated-type equipment,
5 correct?

6 MR. BRANHAM: So generally, yes, your Honor. The
7 only thing I would take issue with is they're some sort
8 of special, really nuanced valve, because there were a
9 number of manufacturers.

10 THE COURT: There are a number of different kinds
11 of valves, but what they make is a safety release
12 valve --

13 MR. BRANHAM: Relief.

14 THE COURT: -- of varying sizes and so forth.

15 MR. BRANHAM: Some as big as you can walk through
16 and some smaller.

17 THE COURT: Some smaller.

18 And the record in this case, from sales records
19 for Crosby for materials supplied by Crosby in
20 discovery, indicates sales of these type valves to
21 many, many different industries for which Mr. Sizemore
22 worked, correct?

23 MR. BRANHAM: So some are supplied by Crosby; some
24 are supplied by other defendants in the case. For
25 instance, we have got some documents from Foster

1 Wheeler which indicate Crosby valves.

2 THE COURT: Right. But Crosby valves are among
3 those that are sold to various -- to a multitude of
4 places in which Mr. Sizemore worked.

5 MR. BRANHAM: Yes, your Honor.

6 THE COURT: And at the times when Mr. Sizemore
7 worked there.

8 MR. BRANHAM: At or before.

9 THE COURT: All right. And that's your contention
10 as to why both the motion for dismissal for lack of
11 personal jurisdiction as well as the motion for summary
12 judgment should both be denied?

13 MR. BRANHAM: Yes, your Honor.

14 THE COURT: All right, sir.

15 Mr. Reid, any reply?

16 MR. REID: Your Honor, I think we're confined to a
17 record that's before the Court, and there's nothing in
18 this record that supports the suggestion that Crosby
19 valves are covered in asbestos, as Mr. Branham says.
20 That's just not there.

21 Secondly --

22 THE COURT: I don't think that's the -- I think
23 the averment about exposure has to do with the
24 gasketing and packing and other material within the
25 Crosby valve rather than, I think, the -- as I

1 understand it, the pertinence of the argument "covered
2 in asbestos" is an explanation for why Crosby was not
3 identified.

4 We know that Crosby's logo generally appears on
5 its valves, correct?

6 MR. REID: That's correct. And they're not
7 insulated, so he would have every reason to see the
8 Crosby logo if he was working anywhere near them.

9 Secondly, there are not any documents in this
10 record about Celanese, Dupont, or any of the other
11 places other than the ones I mentioned.

12 Third, most of our --

13 THE COURT: Has material been produced that is
14 available to plaintiff that plaintiff would --
15 plaintiff avers that they have material which has been
16 supplied by Crosby and others that presumably would be
17 introduced and used in evidence in this case that shows
18 a variety of sales by Crosby to a variety of different
19 companies that use boilers and other type equipment
20 that requires safety valves in South Carolina.

21 Is he incorrect about that?

22 MR. REID: Nothing has been put -- nothing was
23 submitted in connection with their summary judgment
24 motion, and I have not been provided anything of that
25 nature by the plaintiffs.

1 I want to point out that our typical valve on a
2 boiler was an H series valve, safety valve. And as the
3 records from the Florida plant suggest, it was
4 extremely rare for us to have an asbestos gasket. So
5 he could be near Crosby valves that are being worked
6 on. And the record doesn't support that he was. But
7 even if he was, most of our valves didn't have
8 asbestos. In fact, most didn't even have gaskets or
9 packing at all. Two out of 65 in Florida did, at a
10 site where he never even said the word valves.

11 And it's not like we have a monopoly, that we're
12 the only relief valve maker out there. He was asked
13 about other -- he mentioned other valve makers
14 generally, and we have got records of other safety-type
15 valves at some of these sites. So to suggest that
16 because there's some generic reference to relief valves
17 doesn't get you anywhere. We still have to guess what
18 sort of relief valve it is.

19 Moreover, there's not anyplace in this record
20 where he says he went in and did work on the internal
21 components of a relief valve. At one point he mentions
22 removal of a relief valve that apparently was sent off
23 elsewhere and calibrated. So there simply isn't a
24 record to support exposure.

25 In short, your Honor, this is a case that

1 illustrates the difference between conjecture and
2 speculation on one hand and inference on the other.
3 You can't just draw inferences from this record.
4 There's no -- there's nothing that would suggest that
5 it's more likely than not that he worked on a Crosby
6 valve. The jury would have to speculate, and in most
7 instances on multiple levels, to think there was
8 exposure.

9 So, in short, you know, this is their moment to
10 put forth the evidence to demonstrate to the Court what
11 it was that creates a general issue of material fact,
12 and they simply have not done it.

13 THE COURT: Thank you, Mr. Reid.

14 Well, as we know in motions for summary judgment,
15 the evidence is viewed in the light most favorable to
16 the nonmoving party, which in this case would be
17 plaintiff.

18 I believe that there is sufficient evidence in
19 this record to indicate a frequency, regularity, and
20 proximity to safety release valves, some of which sold
21 by Crosby in many places in which Mr. Sizemore worked
22 in South Carolina over a 47-year career, to indicate
23 exposure, potential exposure sufficient to meet, at
24 this moment in the proceedings, the requirements of
25 Lorman, and therefore I would deny the motion for

1 summary judgment.

2 Similarly, I will deny the motion to dismiss on
3 personal jurisdiction grounds for the same reasons,
4 that the record at this moment is sufficient enough to
5 move forward beyond a dismissal.

6 Now, that's the motions in limine.

7 Now, I will say this: Boy, have we jumped through
8 some hoops about trying to keep all this train on the
9 track.

10 At the moment, as we know, Hampton has cases for
11 the week of May the 13th. They do not have cases for
12 the week of May the 20th. We are scheduled at this
13 time. The jury has been summoned. And so while we
14 would be in a position to try this case beginning on
15 Monday, the 20th, and we have got the motions in limine
16 to deal with, here is what I would suggest we do -- but
17 I don't want to prevail on your kindness too much, both
18 Mr. Reid and Mr. McLeod from out of town. I know
19 you're anxious to dispose of this and get on to other
20 business that you have.

21 We can either go on and run through these motions
22 in limine now or we can do that after we finish with
23 J&J. I want to dispose of everything I possibly can
24 today so that these things -- each of these trains
25 stays on the track until we see what, if anything, we

1 can try.

2 So I'm going to turn to you-all first, Mr. Reid,
3 because you and Mr. McLeod come from afar, and ask what
4 you prefer.

5 MR. REID: Your Honor, the practical answer is I
6 have a 6:30 flight. So I would suggest perhaps just in
7 the event that there's some potential that it might
8 impact our case, that we move to Johnson & Johnson and
9 we'll --

10 THE COURT: That's great. If that's okay with
11 y'all. Thank you very much for accommodating me. So
12 we'll go on now and move to the Johnson & Johnson case.

13 And we'll come back to Sizemore, of course.

14 Madam Court Reporter, we're moving now to
15 Beth-Anee Johnson against Johnson & Johnson. And that
16 is a Charleston case.

17 That would be Mr. Chris Swett and others from
18 Motley Rice for plaintiff. And on defense side,
19 Mr. Louis Herns heads the defense team.

20 Take your time getting set up and when you're
21 ready, we'll proceed.

22 I'm sorry. I keep trying to make this case be
23 from Charleston. It's here.

24 The first thing would be the summary judgment
25 motions. Let me just be sure I have got my hand on

1 those.

2 MR. HERNS: We did not file a summary judgment
3 motion on behalf of Johnson & Johnson or Johnson &
4 Johnson Consumer, Inc.

5 THE COURT: You have no summary judgment motions?

6 MR. HERNS: Yes, ma'am. That's correct.

7 THE COURT: And, Mr. Swett, you have no summary
8 judgment motions?

9 MR. SWETT: Your Honor, there was originally, if
10 you saw some in the file. The retailers filed summary
11 judgment motions. It's since been dismissed.

12 THE COURT: And all that's out of the way. So we
13 can proceed to the various motions in limine and other
14 matters.

15 MR. SWETT: Yes, your Honor.

16 THE COURT: All right. Well, I have plaintiff's
17 motions in limine, then, and I'll start with those, if
18 everybody can stay on track with that.

19 All right. The first plaintiffs motion in limine
20 is the omnibus motion. I'll just tick down this thing,
21 and if we've got one that is contested, then we'll go
22 there.

23 The first is collateral source. Of course, the
24 collateral source including sources independent of
25 defendant here, including social security benefits,

1 including comp, I would grant the motion to exclude
2 them unless defendant has anything they wish to say
3 about that.

4 MR. HERNS: Excuse me, your Honor. I'd like to
5 introduce to you Mr. Matt Schroll from the Nelson
6 Mullins law firm in Baltimore. He will be arguing this
7 motion.

8 THE COURT: All right. You may proceed, sir.

9 MR. SCHROLL: Good morning, your Honor.

10 THE COURT: You're going to oppose this motion, as
11 I understand it?

12 MR. SCHROLL: I just want to introduce and state
13 for the record that there are a number of these that we
14 have agreed to already, and number 1 is one of them.

15 THE COURT: Okay. Very good.

16 MR. SCHROLL: If you wanted us to identify the
17 ones where I think we have stated --

18 THE COURT: That's good. Let me go through the
19 notebook so I can keep up.

20 One is agreed to.

21 Two is settlements with other defendants.

22 MR. SWETT: It's agreed to, your Honor.

23 THE COURT: Very good.

24 Three is the American Tort System.

25 MR. SWETT: It's agreed to, your Honor.

1 THE COURT: Four is the effect of claims on
2 insurance premiums.

3 MR. SWETT: It's agreed to, your Honor.

4 THE COURT: Five is asbestos companies in
5 bankruptcy.

6 MR. SWETT: That is agreed to.

7 I just want to make sure that that does include,
8 in fact, Imerys as well.

9 MS. BROWN: Yes, your Honor.

10 THE COURT: Yes. I understand the agreement would
11 be with regard to any company that's in bankruptcy,
12 right?

13 MS. BROWN: Yes, your Honor.

14 THE COURT: Very good.

15 6, any reference to any ruling by another court on
16 admissibility of the testimony of a witness.

17 MR. SWETT: Your Honor, they oppose this one. You
18 know, I'd certainly argue our position and then let
19 them state their position.

20 We don't believe that the fact that any other
21 judge or court has excluded an expert's testimony is
22 relevant in this case. You are the sole gatekeeper in
23 this court as to qualifying experts as to whether or
24 not they are qualified on a specific area.

25 The way we dealt with this specific issue in the

1 last trial was we agreed -- or all the parties agreed
2 that we could ask our expert: Well, you've been
3 qualified as an expert in this court. And that was
4 okay, but we agreed not to ask our expert, Well, have
5 you been recognized as an expert in other courts across
6 the country?

7 And based on the fact that we agreed not to ask
8 that, they agreed that therefore it wasn't necessary to
9 ask them if they have ever been excluded by any other
10 courts in the country, and we would be willing to make
11 that same agreement in this case.

12 THE COURT: That's the way we have done it before.
13 How about it, sir?

14 MR. SCHROLL: We agree to that.

15 THE COURT: Very good. So neither side will
16 reference anything other than if they have been
17 admitted as an expert in this case or in South
18 Carolina, but I would think that what you're going to
19 end up doing is saying "in this case" and confine it,
20 both sides, to that.

21 MS. BROWN: Your Honor, good morning. I'm Alli
22 Brown for J&J. And I would just clarify to the extent,
23 though, that they open the door by suggesting that you
24 have been qualified by courts around the country, then
25 we would be entitled --

1 THE COURT: Sure. They go at their peril if they
2 try to do that, but my bet is they will be careful.

3 MS. BROWN: Thank you, Judge.

4 THE COURT: Seven, any mention that other
5 defendants not present were sued by plaintiff.

6 MR. SWETT: That's agreed to, your Honor.

7 THE COURT: Very good.

8 Number 8, felonies and convictions not involving
9 dishonesty or moral turpitude.

10 MR. SWETT: That's agreed to, your Honor.

11 THE COURT: Ten, past alcohol or drug use.

12 MR. SWETT: That's agreed to, your Honor.

13 THE COURT: 11, other nonlife-threatening medical
14 conditions.

15 MR. SWETT: This one is opposed. If I may be
16 heard on this one, your Honor.

17 THE COURT: Yes, sir.

18 MR. SWETT: So, in this case, there are two
19 medical conditions specifically I know the defendants
20 raise in their briefing. One is the fact that
21 Mrs. Johnson had or has endometriosis. The other is
22 that she had or has chronic inflammation. And we don't
23 believe those are relevant. Now, I'll tell you why.

24 They argue for two reasons that they may be
25 relevant in their briefing. One is as to causation of

1 mesothelioma, and the other is as to damages for
2 reducing life expectancy.

3 Johnson & Johnson has two causation experts, maybe
4 more, in this case. I know Dr. Diette and
5 Dr. Attanoos. They have both admitted in their
6 depositions that there is absolutely no evidence that
7 her endometriosis caused or contributed to her
8 mesothelioma.

9 They both admitted -- and the page cite for
10 Dr. Attanoos is page 72 of his deposition in this case,
11 and Dr. Diette is pages 59 through 60 and 74 through
12 75.

13 They both admitted that there's no evidence that
14 chronic inflammation caused or contributed to her
15 mesothelioma. So we don't think it's relevant for
16 causation.

17 As to the damages issue, neither of their
18 experts -- none of their experts will say that her life
19 expectancy was shortened because of either
20 endometriosis or chronic inflammation. So we don't see
21 any way that these nonlife-threatening medical
22 conditions are relevant in this case. It's just a --
23 you know, if they want to throw it out there, it's just
24 to make the jury speculate about medical issues that
25 aren't at issue.

1 Thank you, your Honor.

2 THE COURT: All right, sir. Say your name for me
3 again.

4 MR. SCHROLL: Yes, your Honor. May I be heard?

5 THE COURT: Say your name.

6 MR. SCHROLL: Matthew, Schroll, S-c-h-r-o-l-l.

7 THE COURT: Very good.

8 MR. SCHROLL: Thank you, Judge.

9 Your Honor, as to the two points raised by counsel
10 as to causation, it's not a matter of whether or not
11 these conditions caused peritoneal mesothelioma, but
12 our causation experts will discuss literature noting
13 that these processes are correlated with the occurrence
14 of peritoneal mesothelioma.

15 And this sort of dovetails with the number 12 --

16 THE COURT: Correlated is not any kind of medical
17 term that I'm familiar with. What do you mean by that?

18 MR. SCHROLL: So, your Honor, our causation
19 experts will testify that the occurrence of peritoneal
20 mesothelioma, particularly among women, occurs without
21 exposure to asbestos. You're familiar with --

22 THE COURT: I'm very familiar with that, and we're
23 going to have a big discussion about Dr. Attanoos. I
24 qualified him as an expert in the Boyd-Bostic case. I
25 have read very carefully what's been said here, and I

1 have looked very carefully at his writings, et cetera,
2 and I've got some concerns about the opinion he
3 expresses, the flat opinion that there's no asbestos in
4 J&J talc and there's no -- that her mesothelioma was
5 not caused by asbestos.

6 And so if you've got something to offer that
7 relates endometriosis and chronic inflammation to her
8 mesothelioma, I want to know about it.

9 What I understand him to say is it's idiopathic or
10 spontaneous, and there are a lot of different ways
11 those terms are used in his evolving testimony about
12 this issue. But I don't pretend to remember every
13 single thing that's been said, but I've read it all
14 pretty recently, and I don't see anything that suggests
15 that endometriosis or chronic inflammation caused her
16 to develop mesothelioma.

17 MR. SCHROLL: Well, your Honor, I would suggest
18 that it's not -- again, it doesn't suggest that those
19 disease processes caused her peritoneal mesothelioma,
20 but the fact that they -- that she has them, that
21 they're there and that there is literature that
22 Dr. Attanoos will say and rely on that shows that,
23 among occurrences of peritoneal mesotheliomas, that
24 these other disease processes are also present, bears
25 on his opinion about wealth of knowledge that shows

1 that peritoneal mesotheliomas among women are unrelated
2 to asbestos exposure.

3 THE COURT: I don't get that connection at all. I
4 don't understand that connection one bit.

5 He does opine that 60 to 70 percent of women who
6 have peritoneal mesothelioma develop it either
7 spontaneously, idiopathically or it's not caused by
8 asbestos. And, frankly, I'm still hunting for what the
9 scientific foundation for those assertions is. But how
10 do you leap from that to saying endometriosis or
11 chronic inflammation bears on that?

12 MR. SCHROLL: Your Honor, I would suggest that the
13 literature that Dr. Attanoos would rely on shows that
14 the presence of those is consistent with the peritoneal
15 mesothelioma being idiopathic or spontaneous.

16 THE COURT: So, no, sir. At most, there's some
17 observation that some of these folks also have
18 inflammation and/or endometriosis, but there's -- not
19 even Attanoos says that either of these diseases have
20 any impact on the diagnosis that he makes that they are
21 not caused by -- that the mesos are not caused by
22 asbestos, one, and, two, that they are spontaneous or
23 idiopathic. He doesn't relate this chronic
24 inflammation or endometriosis to either of those.

25 MR. SCHROLL: I --

1 THE COURT: He observes that some of the people
2 who have mesothelioma also have these other conditions.
3 He doesn't make the link between those two from a
4 medical standpoint other than they both exist. He
5 doesn't have any testimony that says the one causes the
6 other.

7 MR. SCHROLL: Your Honor, your link, I would agree
8 as you state to causation, but I think it's no
9 different than in other asbestos case saying that there
10 was the presence of pleural plaques. It would be
11 indicative --

12 THE COURT: No, sir. Pleural plaques are a direct
13 indication that something has happened relative to the
14 impact of asbestos.

15 Endometriosis and chronic inflammation, I have
16 never seen any literature that suggests that those are
17 indicators of the development of mesothelioma --

18 MR. SCHROLL: Well, your Honor --

19 THE COURT: -- or the impact of asbestos on the
20 body.

21 MR. SCHROLL: Your Honor, I would submit to you
22 again that Dr. Attanoos is not going to say that those
23 disease processes are causal, but he will rely on
24 literature that notes that they occur at the same time
25 in a number of cases.

1 THE COURT: Unless he can relate them in a
2 causative way, that is simply an observation that
3 causes the jury to speculate about something when he
4 can't tie it to the development of the disease at all.

5 MR. SCHROLL: Your Honor, again, I think there's
6 an issue about a difference between stating that those
7 cause it definitively and just noting that they occur
8 in a number of peritoneal mesothelioma cases that are
9 unrelated to asbestos. So I understand --

10 THE COURT: Mr. Schroll, I will say this: I've
11 never heard a medical witness yet say it definitively.
12 They all testify to a reasonable degree of medical
13 certainty. And I'm assuming that that's the way that
14 Dr. Attanoos will testify as well.

15 He's not -- definitively has never been the
16 standard for any kind of medical testimony, but there's
17 got to be some causative connection to a reasonable
18 degree of medical certainty, and I don't see it in this
19 material, all of which I read again last night. I read
20 Attanoos' article again this morning.

21 MR. SCHROLL: I understand, your Honor, and I'll
22 just -- I'll note again that Dr. Attanoos will not come
23 in and say those are causal. He will just note the
24 presence. I'll move on to --

25 THE COURT: Well, then, my response on number 11

1 is I will grant the motion.

2 MR. SCHROLL: Well, your Honor. I'm sorry. I
3 didn't get to address counsel's second argument about
4 our argument about how it relates to plaintiff's health
5 condition, pain and suffering.

6 THE COURT: Life expectancy. You don't have any
7 expert that says life expectancy is impacted by either
8 of these conditions, as I understand it.

9 MR. SCHROLL: Your Honor, my understanding is that
10 there's also a lost wage claim here, and we believe
11 that that bears on the plaintiffs ability to make that
12 lost wage claim about whether or not she can continue
13 to work independent of the diagnosis of peritoneal
14 mesothelioma.

15 THE COURT: I think that's a stretch, and I'm
16 going to grant the motion.

17 MR. SCHROLL: Thank you, your Honor.

18 THE COURT: Number 12, asbestos generally as the
19 cause of plaintiffs mesothelioma. This is: Defendant
20 should be precluded from stating or indicating in the
21 presence of the jury that the plaintiffs mesothelioma
22 is caused by anything other than asbestos exposure.

23 I assume that's contested.

24 MR. SWETT: It is, your Honor. I think that is a
25 catchall that included the previous one, and it also

1 includes the spontaneous. I think if we address the
2 other issues, we don't specifically have to address
3 number 12. It's going to be addressed either way.

4 THE COURT: I agree with you. I'll deny this one
5 as it stands, and we'll move on to the more specific
6 about Dr. Attanoos, et cetera.

7 The second motion in limine is to exclude
8 defamatory comments by defense counsel aimed at
9 prejudicing the jury. I'm sure you all will have
10 agreed upon this.

11 MR. SWETT: Your Honor, in fairness, there was an
12 agreement that they would not say that this is a scam,
13 a fraud perpetrated by plaintiffs' lawyers, and there
14 was one more, but --

15 THE COURT: Lawyer-made sham.

16 MR. SWETT: Right. I would respectfully
17 request -- just a little bit of background. I'm not
18 going to get into all the facts of what happened
19 previous, but we have had, across the country, rulings
20 on this issue, and it doesn't matter. They still get
21 up and do it in closing argument, and at that point
22 it's too late.

23 So I would ask for a ruling such that sanctions
24 are in play, but I do want to address three specific
25 areas that touch on this.

1 And one would be we would ask that they be
2 precluded from stating or insinuating that this is just
3 greedy plaintiffs' lawyers looking for the next big
4 target.

5 I mean, there are ways to insinuate these things
6 that they do, and when they do it throughout the entire
7 trial, they tie it all together in closing arguments,
8 and it's very prejudicial.

9 Another example would be talking about 1-800
10 plaintiffs' lawyers' ads. Well, we don't run ads,
11 Motley Rice, and the plaintiff in this case didn't find
12 us through an ad. She researched herself and
13 determined that there were papers out there that showed
14 asbestos in baby powder, and that's how she decided to
15 sue Johnson & Johnson in this case. That's what the
16 record says. So we would ask they not be allowed to
17 interject anything about plaintiff lawyer advertising.

18 Another question that they like to ask is
19 nobody -- and it ties in with one of the other motions
20 in limine that we're going to get that's related. They
21 ask questions without foundation to come back and make
22 these same arguments.

23 One example is: Well, no one other than
24 plaintiff's lawyers ever told you that Johnson's baby
25 powder caused your mesothelioma.

1 Well, in this case, there's no foundation for that
2 question. She was asked in her deposition. Her
3 doctor -- she never asked her doctor what caused her
4 mesothelioma. Her doctor never told her what he
5 thought, her treating doctor. And that's because, as
6 she said, his objective is to treat. He could care
7 less about causation. She's dying. She's scheduled
8 the middle of next week to go back and have another
9 surgery, just sit in the hospital two more weeks just
10 so she can live a couple more months. They're not
11 worried about what caused her disease; they're trying
12 to treat her.

13 And that's the equivalent of asking the age-old
14 question: When did you stop beating your spouse?
15 There's no foundation. It is a --

16 THE COURT: Well, Mr. Swett, let me just shorten
17 this and tell you-all this, and I've tried several of
18 these cases and many, many other asbestos cases, and I
19 think all of you-all well understand how we operate in
20 South Carolina. We don't do it the way it apparently
21 is done in some other states.

22 We don't allow any reference to the attorneys
23 involved, to the defendants. We don't allow y'all to
24 call them killers. We don't allow them to attack
25 y'all. We don't allow them to delve into how the

1 plaintiff selected her lawyer. We don't allow any
2 talking about looking for a big target or the next big
3 payday or anything of that nature.

4 And I know these lawyers well, particularly
5 Mr. Herns, and I don't think they will violate that.
6 But I will indicate very firmly on both sides that,
7 first of all, there will be no references of that kind
8 by either party being pejorative to the other party, to
9 their lawyers, to their organizations.

10 We're going to try this on the basis of evidence,
11 and the status of the two lawyers, two sides and their
12 lawyers, is not evidence of anything. So that won't be
13 done. Just as the Golden Rule will not play a part in
14 this, just as the reptile arguments and things of that
15 nature, that's just not how I allow cases to be tried.
16 And I'm not alone in this. That's how we try cases in
17 South Carolina. We try them on the basis of the
18 evidence presented.

19 I know you were very disquieted at the way your
20 case was pursued in New Jersey, I believe it was. That
21 won't happen here. I don't know who those lawyers were
22 for J&J there, but Mr. Herns is the lead lawyer in this
23 case here. I have every confidence that this case will
24 be tried as it should be. And I have every confidence
25 in you, Mr. Swett, that you will try it that way too.

1 MR. SWETT: Thank you, your Honor. If I may just
2 raise one point that's related to that.

3 There is an issue that was opposed in the
4 response, so I wanted to just address this one specific
5 issue and see if we can get agreement or ruling one way
6 or the other.

7 It was argued in closing argument tied into this
8 whole lawyer-made thing that plaintiffs didn't even
9 send this case to their expert until after they had
10 already filed the lawsuit.

11 THE COURT: We're not going to allow that to
12 happen. That's not evidence of anything, those kinds
13 of things. You're quite right about that. We can't,
14 as we sit, think of all of them. And I know you were
15 in a bind about that when it finally was argued that
16 way because then you have to decide, am I going to
17 object in front of the jury when it's a jury argument
18 or I'm not.

19 But I think the lawyers well understand that I
20 just don't permit such things, and I will deal with
21 motions for sanctions if I have to, if those things
22 occur, but I just don't believe they will.

23 So be comforted by that, Mr. Swett, and if you see
24 anything along those lines, and I say this to the
25 defense counsel as well, you immediately stop the

1 proceedings, approach the bench, and we'll deal with
2 them.

3 MR. SWETT: Thank you, your Honor.

4 THE COURT: All right, sir.

5 So with respect to excluding defamatory comments,
6 that was number 2. That's granted.

7 With regard to number 3, plaintiffs motion in
8 limine regarding other asbestos exposure, that
9 defendant be prohibited from referencing other
10 potential exposures to asbestos unless they make an
11 offer of proof as to substantial exposure, I don't
12 routinely grant this. It rarely comes up. But do you
13 have something?

14 MS. BROWN: I just want to revisit the prior
15 ruling just for a point of clarification, as I
16 understand your Honor is, perhaps, granting that
17 motion.

18 Mr. Swett and I had a conversation earlier this
19 week. We were, of course, disappointed by the motion,
20 and I assured him we intend to operate appropriately in
21 the courtroom and consistent with your Honor's ruling.

22 But one point of clarification I would seek, your
23 Honor. We don't intend to argue that the only person
24 to tell Ms. Johnson that she has mesothelioma from baby
25 powder were the lawyers, but I do think it's fair

1 testimony that the jury should hear that the medical
2 records do not attribute her mesothelioma to baby
3 powder and that her doctors have not told her that her
4 mesothelioma was caused by baby powder.

5 And so I just want to clarify with your Honor so
6 as to not run afoul of the ruling --

7 THE COURT: What is that evidence of? What is
8 that evidence of? I mean, their argument is this:
9 That everyone has their own role to play in treating a
10 sick person.

11 Frankly, in commercial asbestos cases, I have
12 almost never seen a medical record where the doctor
13 says anything other than this is mesothelioma. The
14 doctors do not get into saying, and occurred because he
15 worked around gaskets at Bowater. They just don't do
16 it that way.

17 So it's really not evidence one way or another
18 because the doctors don't -- that's just not their
19 role. Their role is to diagnose the pathology or
20 disease as they see it. And if they can tell what
21 caused the disease, i.e., doctors many times do say
22 asbestos caused mesothelioma, and they back that up
23 with whatever they observed on their tissue samples and
24 their slides and their other physical examination of
25 the patient. Even postmortem slides sometimes is the

1 only way you can really tell.

2 MS. BROWN: Understood.

3 THE COURT: But for the doctor -- whether the
4 doctor has told a patient, hey, this is asbestos from
5 your job, or this is asbestos because of baby powder, I
6 don't think that's pertinent to anything.

7 MS. BROWN: Your Honor, we would confine our
8 questioning and argument, then, to simply just the
9 objective facts of the medical records, you know, who
10 she treated with, what the chest slides showed, what
11 the pathology showed.

12 THE COURT: And it will show mesothelioma.

13 MS. BROWN: Understood, your Honor.

14 THE COURT: I am not -- I have read some of the
15 voluminous material, but I'm not saying that I am
16 completely familiar with all of her medical records,
17 and I don't know whether any of them have any kind of
18 material that indicates asbestos as the cause of the
19 mesothelioma she suffers from.

20 Normally, that's hard to do if they're living. So
21 I don't know about that. But whatever they say, they
22 say, but --

23 MS. BROWN: Understood.

24 THE COURT: -- I would not allow you to say, hey,
25 they never told her baby powder caused it.

1 MS. BROWN: Understood, your Honor. We will argue
2 then just the objective, what the medical records show
3 in terms of her chest films and things like that.

4 THE COURT: Sure. And I think that's fine.

5 MS. BROWN: Thank you, Judge.

6 MR. SWETT: I assume you're talking about
7 biomarkers, is sort of where we're going with this.

8 MS. BROWN: Sure.

9 MR. SWETT: That's fine.

10 THE COURT: Okay. Do we understand each other?

11 MS. BROWN: We do, your Honor. Thank you.

12 THE COURT: Very well.

13 Then we're on -- then, of course, number 3
14 regarding other exposure is granted.

15 Now we come to number 4. This is the motion in
16 limine to exclude testimony of defendant's --

17 MR. SCHROLL: I'm sorry, your Honor. I think that
18 colloquy related to the previous motion. I don't think
19 we were heard on number 3.

20 THE COURT: All right. Well, number 3.

21 MR. SCHROLL: It was opposed, your Honor.

22 THE COURT: All right. What is it -- go ahead,
23 Mr. Swett.

24 MR. SWETT: Thank you, your Honor.

25 THE COURT: I'm trying to move this thing along.

1 I'm obviously not succeeding.

2 MR. SWETT: Your Honor, it's not disputed in this
3 case that she's had no other asbestos exposure. She
4 testified to it. Their experts say she had no other
5 asbestos exposure. Our experts say she had no other
6 asbestos exposure.

7 There's one reference -- the only thing I can
8 possibly think that this comes up. I'm sure I will be
9 corrected. There's one medical record where she said
10 that at one point in time she may have lived in a house
11 that had asbestos siding on it.

12 Now, that should be excluded based under all of
13 your previous rulings because, as you know, the law is
14 and the science is static asbestos does not increase
15 one's risk. There's no evidence that it was
16 manipulated, she was around it. There's no evidence of
17 proximity, frequency. I mean, it should be excluded.
18 I'll leave it at that unless there's new issues raised.

19 THE COURT: Mr. Schroll, is this asbestos
20 siding -- you want to be able to say something about
21 it?

22 MR. SCHROLL: That's one issue, your Honor.

23 THE COURT: I would deny on that. I'm not going
24 to let you talk about unmanipulated building material.
25 Now, if there was some other thing about Sheetrock was

1 hung at one point with a joint compound --

2 MR. SCHROLL: Your Honor, may we have the
3 opportunity to ask her if it was manipulated in her
4 presence?

5 THE COURT: Well, I don't know if you're going to
6 have a chance to ask her or not because I don't know
7 whether she's going to be able to take the stand.

8 MR. SCHROLL: If she's not, then we're not able
9 to, your Honor, but I think it's a statement that was
10 in her medical record, that she reports living in a
11 house that had asbestos siding at one point, and I
12 think we're entitled to ask her anything about that,
13 about whether or not it was manipulated in her
14 presence.

15 THE COURT: Well, maybe you will have a reversible
16 error in the record, but I'm not going to allow you to
17 ask her about asbestos siding or joint compound because
18 I see nothing in the record that indicates that she was
19 exposed to any respirable asbestos from those two
20 things.

21 If you can show that as we get into trial, then I
22 might reverse myself. But at the present moment in
23 time, I'm inclined to grant this motion.

24 MR. SCHROLL: The other item, your Honor, that we
25 noted in our opposition was the testimony of plaintiffs

1 mother where she recalled having a conversation with
2 the plaintiff at the time she was living in Boise,
3 Idaho, and Ms. Johnson expressed to her mother that she
4 was concerned about potential asbestos exposure at that
5 time.

6 And this came up in Ms. Janet Jones' deposition,
7 her mother, and she testified that that conversation
8 happened in realtime. We also think that that's
9 something that we should be able to ask the plaintiff
10 if she recalls that instance and why she believed that
11 at that time.

12 THE COURT: Mr. Swett.

13 MR. SWETT: With respect to that, your Honor, the
14 testimony that they're referring to, one, the plaintiff
15 was deposed in this case, and they asked her straight
16 up: Is there anywhere you possibly think you could
17 have been exposed to asbestos other than potentially in
18 baby powder? She said no.

19 Plaintiffs mother is, like, 80 years old. She's
20 had a stroke. She's got dementia. At the very end of
21 her deposition, she recalled this hearsay that --
22 basically, she recalled her daughter telling her when
23 they were in Utah that some of the people were getting
24 sick out there and she -- according to the mother, it
25 may have related to asbestos. But there was no

1 specifics about anything.

2 I mean, the full testimony is in the response.
3 One, it's speculative, it's hearsay, and it doesn't
4 satisfy any of the requirements in terms of actual,
5 identifiable exposure.

6 THE COURT: I will not allow it.

7 And your objection is, of course, preserved for
8 the record.

9 MR. SCHROLL: Thank you, your Honor.

10 THE COURT: All right. Number 4, motion in limine
11 to exclude testimony of defendant witnesses' personal
12 use of Johnson & Johnson baby powder.

13 Yes. I must say that I had heartburn when
14 Dr. Hopkins testified the last time in Boyd-Bostic
15 about he uses J&J baby powder, his grandchildren use
16 J&J baby powder; some prefer cornstarch, he prefers
17 talc, and all that kind of business. That's not
18 evidence of anything, so I would grant that motion.

19 MR. SCHROLL: Your Honor, may I be heard?

20 THE COURT: Yes, sir.

21 MR. SCHROLL: Your Honor, I think it's -- the
22 point that plaintiffs were making in their motion is
23 that they were arguing that it's not necessarily
24 evidence of causation, but I'll note for the record,
25 your Honor, that plaintiffs are seeking punitive

1 damages in this case. They're going to put in evidence
2 in an attempt to prove the defendant's willful, wanton
3 or reckless conduct.

4 Count 4 of their complaint is for fraud and
5 misrepresentation, which I believe is still a count
6 that they're pursuing in this case.

7 In the paragraphs in that count, they're alleging
8 that defendants failed to disclose and intentionally
9 misrepresented facts to the plaintiff, that they -- the
10 defendants knew that the misrepresentations were false
11 and acted with reckless disregard towards the
12 plaintiff.

13 And, your Honor, it's relevant as a -- does this
14 testimony make more or less -- a fact more or less
15 probable. The allegation --

16 THE COURT: Why in the world does Dr. Hopkins'
17 personal use of Johnson's baby powder or the fact that
18 his grandchildren use it make more or less probable the
19 willful, wanton, and reckless conduct, if any, of
20 Johnson & Johnson?

21 MR. SCHROLL: Your Honor, it makes it less
22 probable because Dr. Hopkins was responsible for
23 product safety and toxicology during much of the same
24 time period that plaintiff alleges she was using baby
25 powder.

1 And it's testimony that the jury can hear and that
2 they can draw an inference that it's less probable that
3 the person in charge of product safety and toxicology
4 would be using a product that he knew to be hazardous,
5 that he knew to have asbestos in it, and that he would
6 endanger his own children and himself through that
7 product.

8 THE COURT: I don't see it, and I would grant the
9 motion to forbid any reference to his personal use or
10 the use of his grandchildren. I don't think that's
11 evidence that is at all pertinent. And I think to the
12 extent that it is, its prejudicial value way outweighs
13 any probative value it might have. It's, in my view,
14 an attempt to appeal to the emotions of the jury.

15 There are plenty of very good ways -- Dr. Hopkins
16 is a respected scientist and a respected member of
17 Johnson & Johnson's leadership and performs very
18 credibly when he testifies. I don't think he needs
19 this kind of emotional tug and pull to make his point
20 about his bona fides, so I will not allow that kind of
21 testimony.

22 MR. SCHROLL: Thank you, your Honor.

23 THE COURT: All right. Number 5, plaintiff's
24 motion in limine to exclude questions based on facts
25 not in evidence lacking foundation with the attempt to

1 attack plaintiffs counsel. Y'all have agreed upon
2 that.

3 MR. SWETT: We have addressed that, your Honor.

4 THE COURT: Very good. That's granted.

5 Number 6 is plaintiffs motion in limine to exclude
6 questions about political blogs of any expert witness.
7 Agreed?

8 MR. SWETT: Yes, your Honor.

9 MR. SCHROLL: Your Honor, I think in our response
10 we agreed to the extent that plaintiffs don't open the
11 door by discussing alleged targeted advertising of
12 African-Americans.

13 THE COURT: You know, that came up before. I have
14 not seen it offered in any case that we have had.

15 What do you say to that, Mr. Swett?

16 MR. SWETT: This is a specific exhibit that they
17 are trying to backdoor out of the case. And your Honor
18 has ruled on this exhibit, and we might as well address
19 it because I assume they're going to --

20 THE COURT: All right. Let's see it.

21 MR. SWETT: I'm sure you guys are familiar with
22 this one.

23 For the record, your Honor, that's P535. It's
24 from the time period 1992. I'll direct the Court's
25 attention to the back page. As of 1992, number 5, item

1 number 5.

2 THE COURT: Talc is an adult-focused business and
3 baby-focused line. Longer term investigating, moving
4 brand to a different franchise, short-term supplement
5 in the plan with periodic adult promotional support,
6 period, five adult FSI.

7 MR. SWETT: Is it the one on negative -- it might
8 be six.

9 May I? It's on the second page, if I may.

10 THE COURT: I see number 2.

11 MR. BRANHAM: Right, but I want to address the one
12 on the back first, your Honor, because you have already
13 ruled on this. It's -- may I see the exhibit?

14 THE COURT: Yep.

15 MR. SWETT: It's number 2, sorry.

16 So in 1992, Johnson & Johnson was aware of
17 negative publicity. They knew doctors were concerned
18 about inhalation of talc. Specifically, it mentions
19 cancer. So they were concerned. They knew. That's
20 notice.

21 Now, in the same year -- flip over on the first
22 page. I don't care to argue they were targeting a
23 certain ethnic group. The point of this document is
24 knowing in 1992 -- this is during the time period that
25 Mrs. Johnson's still using baby powder. They are

1 increasing their marketing efforts to any group of
2 people knowing that there is a cancer link between
3 their talc and -- knowing there is a link between their
4 talc and cancer, they are increasing marketing. They
5 are looking for new growth opportunities despite --

6 THE COURT: This is one of Johnson & Johnson's
7 documents dated 8/5/92: Major opportunities. Number
8 2, investigate ethnic, paren, African-American,
9 Hispanic, closed parens, opportunities to grow
10 franchise.

11 Johnson's baby powder has high usage rate among
12 African-Americans, 52 percent, and among Hispanics,
13 37.6 percent, additional usage. Indices are high for
14 African-American and Hispanic females for Johnson's
15 baby powder talc, 139 and 101, respectively. Hispanic
16 females also have a high index against Johnson's baby
17 powder cornstarch.

18 The brand can increase volume in 1993 by targeting
19 these groups. The brand will institute an adult
20 Hispanic media program and potentially launch adult
21 black print efforts.

22 All right.

23 MR. SWETT: So the way you allowed this document
24 to come in in the first trial, I just asked Dr. Hopkins
25 about it. I pointed to the second page. I said:

1 Dr. Hopkins, y'all were aware in 1992 that doctors were
2 worried about the cancer link to talc.

3 And I flipped over to the first: And,
4 Dr. Hopkins, you agree with me that even in 1992,
5 knowing that, Johnson & Johnson still looked for major
6 growth opportunities to continue selling and up their
7 sale of this talc that's causing cancer.

8 I mean, it's very relevant to the issue of
9 knowledge and basically what did they do once they had
10 that knowledge.

11 THE COURT: Let's stop here and say this number 6
12 had nothing to do with that. That had to do with
13 Dr. Richard Kradin, who is a potential expert for
14 plaintiff, who published a political blog at a certain
15 point in time after the most recent presidential
16 election. And I would certainly grant a motion to
17 prohibit any questions about political blogs by any
18 expert witnesses. So that, no question about it.

19 This is a different thing. This is an evidentiary
20 piece of material. I don't know if this is the
21 appropriate time to discuss it, but what do you have to
22 say, Mr. Schroll?

23 MR. SCHROLL: I think it's appropriate. It's
24 specifically identified in a later motion in limine, so
25 I think now is appropriate.

1 THE COURT: Sure.

2 MR. SCHROLL: I would say that based on counsel's
3 representations that it's not evidence that he intends
4 to use, should he then use the document, in the very
5 least, that number 2 paragraph should be redacted so
6 that the inflammatory part of that document is not
7 shown to the jury.

8 THE COURT: What's inflammatory about it? I mean,
9 y'all -- what he's saying is he wants to use it to
10 point out that at a point in time when there was
11 negative publicity in the health community and negative
12 doctor endorsement because of cancer linkage, Johnson's
13 opportunity profile was to investigate targeting
14 African-American and Hispanic cohorts to grow the
15 franchise. I mean, that's basically the import of this
16 document in part.

17 How is -- everything is prejudicial if it's not in
18 your favor. What is inflammatory about this in a way
19 that is unrelated to the proof that they seek to make
20 and the big proof and -- as you know, the heart and
21 soul of this battle of these J&J cases is when did they
22 know and what did they know and what did they do about
23 what they knew.

24 MR. SCHROLL: I think what counsel first cited was
25 on the second page, number 2. That does not mention

1 any race or ethnicity issues. And then --

2 THE COURT: Well, it says -- it does not. It does
3 not. It says that major obstacles include number 2,
4 the negative publicity from the health community on
5 talc inhalation, dust, negative doctor endorsement,
6 cancer linkage continues.

7 And so they're using that to show that J&J in 1993
8 knew that there was concern being expressed in the
9 medical community about the linkage between Johnson's
10 products, and specifically baby powder, and cancer.
11 And at the same time in that very same planning
12 document for major opportunities, the advertising
13 profile would include targeting a specific -- two
14 ethnic groups who like baby powder and use it a lot.
15 What's -- I mean --

16 MR. SCHROLL: Your Honor, when I was --

17 THE COURT: It's not a pretty picture, but what
18 is -- what makes it inadmissible?

19 MR. SCHROLL: Well, your Honor, I would say that
20 when you talk about prejudice, is it overly prejudice
21 that it outweighs its probative value? I would submit
22 to you that counsel can make his point that there was,
23 on the second page, the number 2 paragraph, and then on
24 the first page, it can be investigate opportunities to
25 grow the franchise, that point can be made without

1 mentioning ethnic, African-American or Hispanic.
2 That's just inflammatory, and it sort of injects race
3 and ethnicity into an issue to a point that I believe
4 counsel is not trying to make.

5 THE COURT: Well, the argument would be that
6 Johnson & Johnson injected that issue into it because
7 of the advertising campaign they planned, and this is
8 evidence of it from their records.

9 MR. SCHROLL: But, your Honor, and I would just
10 submit that it's very inflammatory and overly
11 prejudicial and it's not relevant.

12 The fact that it's certain ethnic groups that are
13 targeted is not relevant to counsel's point that
14 they're arguing that it was to investigate
15 opportunities to grow the franchise.

16 THE COURT: Let me just say this: At the moment
17 I'm inclined to admit it, as I did before, but I will
18 allow you to revisit this issue if you can give me some
19 better information, and it can be in the form of legal
20 research from other courts as to this very issue and
21 whether anyone has made the determination that the
22 prejudicial nature of this material outweighs its
23 probative value.

24 I won't close the door to you on that argument. I
25 understand the argument. It was the same argument that

1 was made before. I allowed it. But I will revisit it.
2 I will permit you to submit additional material if you
3 would like.

4 MR. SCHROLL: Thank you, your Honor.

5 THE COURT: All right. Item seven, motion in
6 limine to preclude defense experts, including
7 Dr. Attanoos, from offering any nonexpert opinions or
8 opinions for which they are not qualified, unreliable
9 opinions lacking foundation at trial.

10 This is a point of concern to me, and so I turn --
11 I'll be honest with you. I have had concerns about
12 both of the experts, the big experts in this case,
13 Attanoos for J&J and Longo for y'all.

14 Longo's situation has been clarified rather
15 considerably because he now uses, as I understand it,
16 72 samples that are all from the historic files of J&J.
17 The biggest thing I have been concerned about with
18 Longo was the chain of custody with these cans of baby
19 powder that pass through various hands of various
20 plaintiffs' lawyers and then came down, and I have
21 agonized a lot about that before.

22 Apparently, that's been cured. Now, they have
23 still got all kind of contentions that we'll hear
24 about, about the reliability of below-the-waist testing
25 and other things that relate to Longo's testimony.

1 But I'm at Attanoos right now. And, specifically,
2 Mr. Swett, if I could target your argument a little bit
3 here.

4 MR. SWETT: Yes, your Honor.

5 THE COURT: You have focused, as I understand it,
6 on two big opinions of Dr. Attanoos. One is that her
7 mesothelioma was not the result of exposure to
8 Johnson's baby powder, but rather it occurred
9 spontaneously or idiopathically.

10 MR. SWETT: Yes, your Honor.

11 THE COURT: And you contend that he is not a
12 reliable expert who meets the tests of the rules and
13 therefore not qualified to offer this opinion.

14 MR. SWETT: Yes, your Honor.

15 THE COURT: Am I focused on what you're concerned
16 about?

17 MR. SWETT: I can address that first, your Honor,
18 yes.

19 THE COURT: All right, sir.

20 MR. SWETT: So Dr. Attanoos intends to give the
21 opinion that Johnson's baby powder could not have
22 caused Mrs. Johnson's mesothelioma. This opinion lacks
23 foundation and is unreliable.

24 Sort of back up a bit prior to 2018, before he
25 started testifying for Johnson & Johnson. Even now he

1 will admit -- I won't even back up. Even now he will
2 admit that amphibole asbestos exposure above background
3 causes mesothelioma. Not just pleural mesothelioma,
4 peritoneal mesothelioma, which is what is at issue
5 here. He admits that.

6 Now, he knows -- he admits that Mrs. Johnson used
7 baby powder for 20-plus years, but he specifically
8 chose in this case not to follow his own methodology
9 for looking at whether or not an exposure is causative
10 of mesothelioma.

11 I mean, he's testified that his methodology --
12 whenever you have a potential exposure and you want to
13 determine whether or not that caused or contributed to
14 mesothelioma -- is you look to see whether or not there
15 was any asbestos in the material, determine the fiber
16 type, know what level the product releases asbestos,
17 and basically whether or not that person was exposed
18 above background.

19 He doesn't follow that methodology here. And I'll
20 get to it later, the lack of foundation he relies on or
21 attempts to rely on. But here he didn't even look
22 whether or not Johnson's baby powder had asbestos in
23 it. I mean, there's been testing in this record.
24 Johnson & Johnson's own expert, Dr. Sanchez, has tested
25 Johnson's baby powder. He didn't rely on that.

1 Notably, Dr. Sanchez now has found asbestos in
2 Johnson's baby powder. But they didn't give him those
3 results.

4 He didn't rely on Dr. Longo's testing of Johnson's
5 baby powder. He has seen no testing of baby powder or
6 the ore, the Vermont talc that it came from. None of
7 them.

8 So he didn't follow number 1. And because he
9 didn't look to see whether or not there was asbestos in
10 the baby powder, he doesn't know what type of fibers
11 are involved, he doesn't know at what levels asbestos
12 fibers are released, and he certainly can't know
13 whether she was exposed to above background levels of
14 asbestos or not.

15 He didn't look at any of the fiber release studies
16 that are in evidence; Dr. Longo's fiber release study.
17 He didn't even look at any of the peer-reviewed
18 literature. He admitted he hasn't even looked at the
19 peer-reviewed literature that addressed whether or not
20 there was asbestos in baby powder in general. He said
21 something like he tried to read Blount's article, but
22 he didn't.

23 I mean, he hasn't looked at any of the pertinent
24 evidence in this case. Instead, while choosing to
25 ignore the actual evidence in this case, he instead

1 claims to base his opinion on evidence that can't form
2 the basis of this opinion.

3 He relies on, one, epidemiological studies of talc
4 miners in Italy where it's documented that those talc
5 mines, non-Johnson & Johnson talc mines, are free of
6 asbestos. He focuses on toxicological studies of rats
7 exposed to Italian cosmetic grade talc with no
8 asbestos. And he focuses on mortality studies of
9 non-Johnson & Johnson Vermont talc mines.

10 He does that so -- if we just back up, he looks at
11 everything non-J&J, everything arguably -- yeah, there
12 are talc miners in Italy, but they're not exposed to
13 asbestos-containing talc. And he ignores everything
14 that's pertinent in this case. He doesn't look at any
15 of the testing of the products at issue in this case.
16 He doesn't look at any of the testing at the mines, the
17 specific Johnson & Johnson mines at issue in this case.

18 It's like an ostrich who sticks his head in the
19 sand. He doesn't want to know because he wants to be
20 able to give his opinion. And it will come out -- if
21 he is allowed to testify, it will come out -- this is
22 important, I think. Since he's testified for Johnson &
23 Johnson, I think he's been retained in 25 cases,
24 non-J&J cases included, he has said every single one of
25 those mesotheliomas, men included, are all spontaneous.

1 There's 25 or 30 cases he's been retained in since
2 2018, men, women, young people, old people, people with
3 pleural plaques, biomarkers of asbestos exposure.
4 Since Johnson & Johnson has retained him, he said
5 every -- there was one he said was commercial
6 asbestos-related. Every other one he said spontaneous.
7 He has no factual foundation for his opinions.

8 So if we're dealing specifically with his
9 spontaneous mesothelioma opinion, it's sort of a moving
10 target. But I think the most important thing to focus
11 on here, one, he didn't follow his own methodology. I
12 don't know how he can even give this opinion about
13 whether or not her use of baby powder affected her
14 meso.

15 But then the second part is he wants to call it
16 spontaneous. And I think the only key part we need to
17 look at with that is before 2018, Dr. Attanoos
18 consistently opined that 60 to 75 percent of female
19 mesothelioma patients had a known history of asbestos
20 exposure. Now that he's been retained by Johnson &
21 Johnson, spontaneous mesotheliomas comprise 60 to
22 90 percent of female mesothelioma cases.

23 And if we look at the evidence in this case, what
24 he purports to rely on, I asked him specifically. I
25 said: Okay -- in his deposition, I said: Okay,

1 Dr. Attanoos, you don't think she had any asbestos
2 exposure. And I'm looking at all your various
3 opinions, and you say idiopathic. You say spontaneous.

4 He defines spontaneous as a naturally occurring
5 mesothelioma caused by age and genetics. All right?
6 And idiopathic is a mesothelioma without a known cause.

7 So I said: Dr. Attanoos, when you're faced with a
8 case like this, how do you determine whether or not
9 you're going to call this an idiopathic mesothelioma,
10 no known cause, versus one that you're going to tell a
11 jury is spontaneous, i.e., caused by genetics and age?
12 Because that's important. How do you reach that
13 difference? How do you reach that conclusion?

14 And he said, page 84 to -- no, 86 to 87 of his
15 deposition. I said: Wouldn't you need genetic testing
16 to determine whether or not it's a spontaneous
17 mesothelioma?

18 His answer: You would need genetic testing to see
19 if there was any constitutional basis to say whether
20 the individual had a cancer previous position.

21 And he goes on, and then he says: And ultimately
22 before you would say that this is a naturally occurring
23 mesothelioma.

24 Well, you know, he hasn't seen any formal genetic
25 testing in this case. Absolutely none. So he has no

1 foundation to come in here and say this is a
2 spontaneous mesothelioma versus an idiopathic
3 mesothelioma, and we believe he should be precluded,
4 one, from even offering an opinion whether her use of
5 baby powder did or didn't cause her mesothelioma. He's
6 got no basis for that. It's unreliable.

7 The peer-reviewed studies they claim he relies on,
8 they're all unrelated to Johnson's baby powder.
9 They're Italian non-asbestos mines. They're rat
10 studies with non-asbestos Italian talc. He doesn't
11 have a proper basis.

12 What he's attempting to do is it's sort of like a
13 general automobile expert who has knowledge about
14 general automobiles but has no knowledge about specific
15 speedometers or instrument panels. He wants to rely on
16 these Italian studies generally, but he doesn't want to
17 get down to the specifics of what's at issue in this
18 case. He's not qualified. So that's the basis of the
19 argument on that issue.

20 We'll address the USGS, which is another big
21 issue.

22 That chart, I'm sure you're familiar with the
23 chart where he wants to talk about the asbestos
24 consumption and how it relates to the meso rates and so
25 they can't correlate. That's another big issue.

1 But I can stop now on the first issue.

2 THE COURT: Let's stop now on the first issue.

3 Well, no. I mean, the whole thing is a -- you are
4 wanting to preclude him from the basic opinion, A, baby
5 powder did not cause her mesothelioma; B, her
6 mesothelioma is naturally occurring because of age and
7 genetics or idiopathic. You want him to be precluded
8 from both of those things.

9 MR. SWETT: Yes, your Honor. And then there would
10 be a C.

11 THE COURT: And the C --

12 MR. SWETT: C is the USGS. So over the years, the
13 USGS puts together -- it's published. And it's
14 Production of Talc. So he puts this chart up -- and I
15 think he did it in our prior cases. He puts this chart
16 up that shows the talc, the ebb and flow of production
17 of talc. You know, it sort of goes up and down.

18 He overlays it with the rate of mesothelioma
19 amongst women. And he comes in and he says, well,
20 because the production of talc went up and down and the
21 rate of meso in women stayed -- he says it stayed
22 stagnant or constant -- he says, therefore, cosmetic
23 talc powders in Johnson's baby powder have no relation
24 to mesotheliomas in females.

25 Well, that has no foundation because I got

1 Dr. Attanoos to admit in his deposition, one, he didn't
2 know that the USGS data was compiled on a voluntary
3 basis. Industry voluntarily submits that. There's no
4 hard-and-fast certainty with that data.

5 He's not aware whether or not Johnson & Johnson
6 ever provided any data for any given year to the USGS.

7 He's not aware whether or not any data on the
8 production of cosmetic talc in any given year came from
9 Vermont mines.

10 As the USGS data shows a rise in production of
11 cosmetic talc, Dr. Attanoos doesn't know how much, if
12 any, of that relates to Johnson's baby powder. He
13 can't say one way or the other.

14 So for one year when production or use of talc
15 went up amongst the general public, he doesn't know if
16 the use of Johnson's baby powder went up or down.

17 Perhaps a bigger issue, a bigger problem, is he
18 acknowledges that cosmetic talc wasn't just used in
19 powders. It was used in chewing gum. You have seen
20 the slides. They argue that a hundred products are
21 made of talc: chewing gum, pills. He doesn't know how
22 much of that data for any given year is actually in the
23 powder form versus chewing gum.

24 And this is important because he admits that talc
25 or asbestos-containing talc has to be in the aerosol

1 form, has to be respirable to cause meso. So for any
2 given year he's relying on this data, he doesn't know
3 how much of that talc that's being produced is actually
4 used in respirable aerosol products.

5 I mean, that's crucial. It's just really
6 disingenuous. When we really dug into the basis of
7 this opinion that he's coming in attempting to tell
8 juries, it lacks foundation. It's very disingenuous.
9 It's unreliable.

10 You know, for any given year, zero percent of that
11 cosmetic talc production could be from Johnson's baby
12 powder. Zero percent could be from aerosol products.
13 100 percent could be just from one manufacturer that
14 produced talc to make chewing gum.

15 THE COURT: I think I understand the argument,
16 Mr. Swett.

17 MR. SWETT: I apologize, your Honor.

18 Additionally, I think it's cumulative if he's even
19 allowed to testify. They have got two experts coming
20 in to say the exact same thing. That's an additional
21 basis.

22 And, finally, we don't think he should be able to
23 talk about any other causes causing her mesothelioma.
24 You know, radiation is a recognized cause. I went
25 through all of them, all the known causes that could

1 cause meso. I went to his deposition, and I said: You
2 can't say to a reasonable degree of medical certainty
3 that this caused it, this caused it, this caused it?

4 He said -- in this case, and he said: No, there's
5 no evidence that any of those other causes caused her
6 mesothelioma.

7 So we don't think he should be able to interject
8 any other causes of mesothelioma other than asbestos in
9 this case because there's no evidence of any other risk
10 factors in this case.

11 Thank you, your Honor.

12 THE COURT: All right.

13 MS. BROWN: May I be heard, your Honor?

14 THE COURT: Yes, of course.

15 MS. BROWN: Thank you.

16 Your Honor, as I understand, there are three
17 issues that plaintiffs are seeking to exclude
18 Dr. Attanoos on, and so I'll take them in turn, and, of
19 course, if your Honor has any questions, I'll answer
20 those as well.

21 But the first is that plaintiffs seek to exclude
22 Dr. Attanoos from testifying that baby powder did not
23 cause Ms. Johnson's mesothelioma. And, of course,
24 plaintiffs own experts agree that when you are trying
25 to answer a question about what caused a disease in a

1 person, the best place to look is the epidemiology.

2 And so they're going to bring Dr. Kradin, their
3 specific causation expert, and he will testify, like
4 all of the plaintiffs case specific experts do, that
5 you look to the studies, the epidemiology studies, the
6 studies in people who were exposed to this product to
7 see if it's causing disease.

8 And, in fact, Dr. Kradin will agree that the very
9 best place to look, the very best epidemiology, is that
10 of the miners and the millers of cosmetic talc, the
11 people who were exposed to the highest levels of
12 cosmetic talc.

13 And so that is exactly what Dr. Attanoos has done
14 here. His opinion that Ms. Johnson's mesothelioma was
15 not caused by baby powder is informed in part by his
16 review and study of the cosmetic talc epidemiology, and
17 that includes studies of the miners and millers in the
18 Johnson & Johnson's Vermont talc mines as well as
19 Johnson & Johnson's Italian talc mines.

20 And I was surprised to hear counsel suggest that
21 the Italian talc mines have no asbestos, which seems
22 contrary to the plaintiffs case here because, of
23 course, those are the very mines that Johnson & Johnson
24 used to source its baby powder for decades. And, in
25 fact, that is the very mine from which the powder that

1 went into some of the Dr. Longo's samples came. And
2 counsel appears to be admitting that that mine, based
3 on the epidemiology, doesn't have asbestos.

4 But there's complete agreement from the experts on
5 both sides that to answer that very sort of threshold
6 question, was her disease caused by this product, we
7 should look at the epi. And that is what Dr. Attanoos
8 has done here to answer that sort of top line question.

9 Now, as counsel points out, his opinion is also
10 informed by, for example, the animal data. And so
11 counsel refers to an animal study that involved
12 injecting Johnson & Johnson's cosmetic talc, Italian
13 talc grade 50, into animals along with chrysotile.
14 And, of course, the animals that received chrysotile
15 got mesothelioma, and the ones that got cosmetic talc,
16 nothing happened. And so that also informs part of
17 Dr. Attanoos' opinion that cosmetic talcum powder could
18 not have caused Ms. Johnson's mesothelioma.

19 And so it is that threshold level your Honor is
20 very familiar with, the South Carolina standard for
21 reliability here. It is consistent in the case law
22 that a reliable and appropriate methodology to employ
23 with a question about whether a product causes disease
24 is to review the published peer-reviewed epidemiology,
25 which, to answer that very first question, is what

1 Dr. Attanoos did.

2 On the second question, your Honor, I understand
3 there's an effort to exclude Dr. Attanoos from saying
4 that Ms. Johnson's mesothelioma was unrelated to
5 asbestos exposure. And I understand that -- to be
6 quite frank, your Honor, the experts and the
7 peer-reviewed literature is not consistent in terms of
8 how they use the term idiopathic, spontaneous,
9 naturally occurring, not related. And I would suggest
10 that there's not a lot of meaning in the differences
11 between those terms.

12 At bottom, Dr. Attanoos' opinion is that her
13 peritoneal mesothelioma, one of the rarest forms of
14 mesothelioma, particularly in women, was not caused by
15 asbestos exposure. And he bases that opinion on a
16 number of factors.

17 It is -- and he bases that opinion on his review
18 of her pathology in this case, of the fact that there
19 was no evidence of any asbestos exposure in the actual
20 pathology that he reviewed.

21 He bases that opinion on his review of the
22 published literature that has, in the most recent five
23 to ten years, looked into women specifically, has taken
24 the statistics of mesothelioma generally and broken
25 them down by gender and looked at whether women's

1 mesothelioma, and particularly peritoneal mesothelioma,
2 could be attributed to asbestos exposure. And we cite
3 in our opposition on page 15 to 16 at least 10 to 15
4 studies, peer-reviewed studies, on which Dr. Attanoos
5 relies for the proposition that peritoneal mesothelioma
6 in women is most often unrelated to asbestos exposure.

7 And I understand counsel and the court's
8 hesitation about the term spontaneous. And perhaps we
9 can sort of assist this process and move it along here.
10 We would agree that Dr. Attanoos will not use the term
11 spontaneous.

12 I read some of your Honor's rulings in some of the
13 prior trials, and I understand the Court has a concern
14 about the idea that this sort of just happened. The
15 gist of his opinion, though, is that it's unrelated to
16 asbestos exposure. And so if the Court has some
17 hesitation about him suggesting it sort of popped out
18 of nowhere by using the term spontaneous, he will
19 confine his opinion to what the published literature
20 says about peritoneal mesothelioma in women not being
21 related to asbestos exposure.

22 And here, in Ms. Johnson's case, in a woman who
23 has absolutely no markers of asbestos exposure, and
24 Dr. Attanoos has reviewed all of the medical records,
25 all of the pathology, all of the available documented

1 evidence, he's coupled that with his review of the
2 peer-reviewed literature to opine that here this rare
3 peritoneal mesothelioma was not caused by asbestos.

4 And then -- sorry. Did your Honor have a
5 question?

6 THE COURT: No. I'll wait until you complete,
7 then I'll ask questions.

8 MS. BROWN: Additionally, there was some
9 suggestion that he -- I think I understand counsel to
10 be concerned that he's not relying on their paid
11 litigation expert, Dr. Longo. And, in fact, I would
12 suggest that what this expert does and what experts
13 should do is rely on the peer-reviewed literature, on
14 the science that takes place outside of the courtroom.

15 And that's, in fact, what Dr. Attanoos has done
16 here. In forming his opinion that cosmetic talc
17 doesn't have asbestos, he relies not only on the
18 epidemiology, but he relies on studies like that that
19 was run by NIOSH and Harvard, by the government, in the
20 '70s of Johnson & Johnson's Vermont talc mines, studies
21 where they went in over a three-year period and
22 collected air samples from the mine and made a
23 determination that Johnson & Johnson's talc in Vermont
24 did not have asbestos. That is a published,
25 peer-reviewed article funded by the government on which

1 he relies.

2 And so I would suggest to the Court that the fact
3 that he does not rely on their paid expert in
4 litigation is certainly not a reason to exclude him.
5 If anything, it is evidence of a more reliable method
6 that he's taken to approach this question of whether
7 there is asbestos in cosmetic talc.

8 Finally, your Honor, there is some discussion
9 about the USGS data. And I would suggest to the Court
10 that all of the issues that Mr. Swett has raised are
11 fodder for cross-examination. Here comes Dr. Attanoos
12 with a graph that shows talc consumption in the United
13 States and a graph that shows peritoneal mesothelioma
14 rates, and he says: Look, they don't correlate. You
15 don't see as cosmetic talc use went up, 30 years later
16 peritoneal mesothelioma went up.

17 And if counsel wants to cross him on, yeah, well,
18 you don't know how much of that was baby powder, well,
19 that's fair for cross-examination, but that's not a
20 reason to exclude the argument, Judge.

21 This is based on published USGS data to which
22 Johnson & Johnson contributes. This is an argument
23 that is in the peer-reviewed literature. The idea that
24 there's no correlation between USGS data and peritoneal
25 mesothelioma rates has been published in part by

1 plaintiffs experts, Dr. Finkelstein, and then a
2 response by Dr. Diette. And so there is a body of
3 scientists in the published literature who have
4 analyzed cosmetic talc consumption and mesothelioma
5 rates.

6 And so I would suggest, your Honor, that there is
7 more than a reliable opinion to the extent that
8 Mr. Swett wants to cross on where the data came from or
9 what it's made up of, that's appropriate for cross.
10 But as a gatekeeper, your Honor, Dr. Attanoos more than
11 meets the reliability test under South Carolina.

12 THE COURT: Okay. Now, how are you doing, Court
13 Reporter?

14 THE COURT REPORTER: I'm fine.

15 THE COURT: All right. Let me ask you a couple
16 questions, Ms. Brown.

17 MS. BROWN: Sure.

18 THE COURT: Dr. Attanoos' opinion that
19 Mrs. Johnson's mesothelioma is unrelated to asbestos is
20 very much informed by his contention that Johnson's
21 baby powder does not contain asbestos, it seems to me,
22 that she used -- she had a heavy use of Johnson &
23 Johnson's baby powder for an extended period of time,
24 but he excludes baby powder as a source for any
25 asbestos exposure on the front end because he doesn't

1 believe that baby powder has any asbestos in it, right?

2 MS. BROWN: Your Honor is correct.

3 THE COURT: Okay. All right. And it seems to me,
4 he kind of backs into this thing that it must be
5 spontaneous or idiopathic. He doesn't have any kind of
6 direct information as to -- if it's spontaneous, and
7 that means it's genetic, he agrees that he's conducted
8 no genetic test and doesn't know if any genetic test
9 has been conducted on Ms. Johnson, so that can't
10 possibly be genetic or age-related infirmities, cannot
11 be to a reasonable degree of medical certainty an
12 underpinning for the opinion that her cancer is
13 spontaneous, that is, related to genetic or age
14 manifestations. He doesn't have anything on that, does
15 he?

16 MS. BROWN: If I could jump in on that, your
17 Honor, as you know, he reviewed in great detail all the
18 pathology that's available here. And as you know,
19 Ms. Johnson was diagnosed at a fairly young age for
20 mesothelioma. She has a history of cancer in her
21 family. And what he found in terms of his review of
22 the pathology also supports his opinion here.

23 What he found was not one, not two, not three,
24 four different neoplasms. So in addition to the tumor,
25 the peritoneal mesothelioma, he found cancer of the

1 appendix, another rare tumor that even their experts
2 agree has nothing to do with asbestos exposure. He
3 found a fibroid, benign tumor of the ovary, and then he
4 found another lymphoma neoplasm as well.

5 THE COURT: Right, but he -- in the face of all
6 that, he does not contend that those things caused her
7 mesothelioma.

8 MS. BROWN: Oh, correct, your Honor.

9 THE COURT: He doesn't contend that either her
10 genetic history or her age or even those specific
11 physical conditions caused her mesothelioma. He simply
12 says it's spontaneous.

13 MS. BROWN: Well, your Honor, I would suggest
14 there's a little nuance there.

15 So the evidence of these other cancers that even
16 Dr. Kradin, their own expert, when deposed said, of
17 course, I'm not even contending they have anything to
18 do with asbestos exposure, is indicative of a genetic
19 process perhaps going on that would --

20 THE COURT: Well, there are a lot of genetic
21 processes that go on in every human being, but we're
22 talking about him relating, as a scientist, a genetic
23 process to the development of mesothelioma. And there
24 is nothing in his testimony that indicates he can do
25 that, correct?

1 MS. BROWN: Well, your Honor, I would disagree
2 just a little bit with the Court. The bottom of his
3 opinion is it wasn't asbestos. And I understand the
4 Court and counsel's concern with the term spontaneous,
5 and he's not going to use that. But it's evidence -- I
6 mean, there's sort of a whole bucket of evidence that
7 it wasn't asbestos.

8 THE COURT: Well, I mean, we don't have res ipsa
9 loquitur in this state or anything close to it, and you
10 can't simply say, well, she had all these other
11 conditions and I say it's not asbestos because I say,
12 as a foundational matter, this baby powder does not
13 contain asbestos and I don't contend she had asbestos
14 exposure from someplace else. So, therefore, I back
15 into the idea that it has to have been either
16 spontaneous or hint, hint, hint, she really has got a
17 lot of cancer in her family.

18 MS. BROWN: Well, your Honor, a couple things. He
19 looked at the pathology. There is no objective marker
20 in the pathology that she was exposed to asbestos at
21 all.

22 THE COURT: Well, he looked at the pathology, but
23 the pathology revealed nothing to him about asbestos
24 and this mesothelioma. It didn't reveal anything one
25 way or another to him.

1 MS. BROWN: Well, there was an absence of
2 any marker. Your Honor is correct. There was an
3 absence of any marker to suggest that it was asbestos
4 exposure. I understand your Honor's concern that he's
5 trying to backdoor an opinion, but that opinion is
6 essentially separate, and that opinion is based on the
7 idea that cosmetic talc does not contain mesothelioma.

8 THE COURT: Okay. Now, let's go into that,
9 because that's really the foundation of it.

10 MS. BROWN: I agree, your Honor, right.

11 THE COURT: Here is the place that I'm very
12 concerned. There is a world of J&J testing, and we
13 have sure had the battles about that and the boxfuls
14 given to the jury and big boxfuls that say, hey, we
15 have tested it all these millions of times and we never
16 found any asbestos. He has not been provided with any
17 of Johnson & Johnson's testing, as I understand it.

18 MS. BROWN: The same with their expert.
19 Dr. Kradin hasn't looked at it either.

20 THE COURT: I'm not talking about him now.
21 Because Dr. Attanoos is going to make affirmative
22 conclusions that baby powder -- Johnson & Johnson's
23 baby powder never contains any asbestos.

24 MS. BROWN: Not true, your Honor. In fact, the
25 concern -- I understand the Court's concern. He is not

1 going to speak to what's in baby powder. He's not here
2 to say 100 percent asbestos-free. That is not his
3 opinion. As your Honor correctly points out, he hasn't
4 reviewed all the testing. That's not his piece of the
5 puzzle. He doesn't know how to interpret microscopy
6 tests anyway. What he is going to opine on is based on
7 the epidemiology. Whatever is --

8 THE COURT: Well, he's not an epidemiologist.
9 He's a pathologist.

10 MS. BROWN: Correct, your Honor. But as part of
11 his general practice, as a practicing physician who
12 sits on the U.S./Canadian international mesothelioma
13 panel, part of what he does as a pathologist --

14 THE COURT: Well, what specific epidemiology is he
15 going to rely on? I have read his articles. I have
16 read all of that. I don't see what he's relying on.
17 He's got the generalities about women, and they evolved
18 over time, but at the moment, it's 70 percent of women
19 who have mesotheliomas, they're spontaneous,
20 idiopathic, but they're not related to asbestos.

21 MS. BROWN: Sure.

22 THE COURT: And there's no specific test that he
23 can point to that has even tested for the presence of
24 asbestos, but he's going to exclude asbestos as a
25 possibility for their mesothelioma based on his kind of

1 general view of what epidemiology as a science shows.

2 What he's really doing is this: He's saying --
3 he's into that old debate over the good asbestos and
4 the bad asbestos. Oh, there's some asbestos that's not
5 really asbestiform. It's asbestos, but it's
6 non-asbestiform asbestos and, therefore, it doesn't
7 ever cause any problems. It's only the asbestiform.
8 Some go even further and say, oh, it's only crocidolite
9 that causes the problem, not even chrysotile.

10 He's not a geologist or anything close to that.
11 But that's the real foundation of his opinion that this
12 baby powder, which he will admit when you drill down to
13 it, does contain amphiboles, some of it does. It's
14 been tested. It's been shown to have it. J&J's own
15 testing has shown that. But he's going to say it's not
16 the bad kind of stuff that causes mesothelioma.

17 MS. BROWN: And perhaps it would give the Court
18 comfort, we're not going to solicit that opinion from
19 him at all. He is not going to talk about what is in a
20 bottle --

21 THE COURT: Well, then, if he's not going to talk
22 about that, what is going to be the foundation of his
23 opinion that Johnson & Johnson's baby powder, which we
24 now will all agree, has some asbestos in it?

25 MS. BROWN: We would disagree with that, your

1 Honor, that's there's asbestos --

2 THE COURT: Well, there's going to be proof that
3 there's some asbestos in it, whether it's the good
4 asbestos or the bad asbestos or a trace of it or a lot
5 of it or whatnot, that all is a big debate. But he's
6 going to categorically say that it cannot possibly have
7 ever caused mesothelioma, that baby powder can.

8 MS. BROWN: And, your Honor, he will base that not
9 on a review of what I would agree he has not done in
10 this case, which is review the testing that Dr. Longo
11 did, the testing that Dr. Sanchez did. That's not what
12 he's qualified to do. That's not what he did.

13 THE COURT: So what is he going to base it on?

14 MS. BROWN: So he's going to base that on his
15 review of the large epidemiology studies of the miners
16 and millers of cosmetic talc.

17 THE COURT: The miners and millers of cosmetic
18 talc have nothing to do with cosmetic consumption of
19 baby powder. These people don't -- are not respirating
20 highly refined and packaged baby powder. What they are
21 respirating is something that occurs when they are in
22 the mines.

23 MS. BROWN: Understood.

24 THE COURT: There is a whole contention about what
25 happens when you respire highly refined, very small

1 particle cosmetic baby powder. The millers and miners,
2 none of them have ever respiration any of that or were
3 they tested for that.

4 MS. BROWN: Well, the reason, though, Judge, it's
5 important when you think about how -- the plaintiffs
6 claims here. Their claim is that the asbestos is
7 contaminating the mine.

8 THE COURT: They are -- no, they are contending --
9 couple of things. They're contending that there is
10 asbestos in the talc mines from which this material was
11 produced and that the refinement that takes place to
12 produce the product, which is baby powder, makes
13 whatever is in that baby powder highly respirable.

14 MS. BROWN: Understood, your Honor. And even
15 though their expert will agree, though, that the people
16 with the most exposure to what gets into baby powder
17 are the miners and the millers.

18 THE COURT: No, I think there is a real scientific
19 debate about that. Some say that there's the highest
20 exposure when it's mined. That depends on, when you
21 drill down to it, how much asbestos there is in the
22 particular mines that you're talking about.

23 MS. BROWN: Understood, Judge.

24 THE COURT: But these cases, for the consumption
25 of cosmetic talc products, depends on a much more

1 specific analysis of how this product is used and was
2 respirated than mining.

3 MS. BROWN: Sure. And on that, a couple things
4 there. One, at least the expert in this case would
5 agree. I understand other experts may take a different
6 position, but at least Dr. Kradin would say miners and
7 millers have the highest amount of exposure.

8 But to your Honor's concern that when it gets into
9 the product maybe it's in a different form,
10 Dr. Attanoos would also rely on the extensive
11 evaluation that the FDA has done on the finished
12 product. So there, as your Honor well knows --

13 THE COURT: Well, that kind of depends on which
14 year you're talking about. We know that, you know,
15 OSHA as well as the FDA's look at asbestos-containing
16 products, and particularly the FDA's look at baby
17 powder products, has evolved tremendously over the
18 years. So, you know, you would have to -- I would have
19 know from Dr. Attanoos exactly what year he's talking
20 about.

21 But what concerns me, he has a blanket opinion
22 that excludes this baby powder as -- well, first of
23 all, he says her mesothelioma is not caused by
24 asbestos.

25 MS. BROWN: Correct, Judge.

1 THE COURT: That's the first thing. And that is
2 highly informed by his contention that it could never
3 have come from baby powder.

4 MS. BROWN: And informed in part, Judge, by the
5 FDA testing, just to answer your question, is square in
6 the heart of the plaintiffs usage in this case.

7 So as your Honor heard in the previous trials,
8 there is a scare, it's in the newspaper, and the FDA
9 gets on top of this and does this 1970s testing, which
10 is really in the heart of the alleged usage here. And
11 so that would also inform Dr. Attanoos' opinion that
12 what was tested by the FDA in the '70s, what was
13 addressed again in the 1980s, as your Honor well knows
14 in the form of the citizens' petition about whether
15 baby powder needs a warning. I mean, they do a
16 worst-case scenario test, as your Honor well knows, and
17 say -- let's assume worst-case scenario, thousands of
18 times more than what the plaintiff even allege here,
19 would somebody be exposed to more than background, and
20 they say no, no warning required and then continue on,
21 as your Honor knows, and test as recently as 2009 and
22 2010. So that also would inform his opinions here in
23 this case as well as the work of the FDA.

24 THE COURT: Well, I am much troubled by this.

25 I will hear one more time from you, Mr. Swett,

1 briefly, please, sir, and let's go on and see what we
2 can do about closing this matter one way or another.

3 MS. BROWN: Thank you, your Honor.

4 MR. SWETT: Very briefly, your Honor.

5 I know Dr. Kradin's not at issue here, but I do
6 want to draw a distinction because he does rely on epi
7 studies. He relies on epi studies showing that
8 asbestos exposure relates to mesothelioma and increases
9 the risk.

10 Dr. Attanoos here -- there are no cosmetic talc
11 epidemiologic studies. There are none. Dr. Attanoos
12 relies on studies not dealing with this product,
13 whereas Kradin deals with studies dealing with
14 asbestos. That's what we're talking about. You know,
15 we asked him, based on a hypothetical question, you
16 know, assuming what our experts found, you know, would
17 this amount of asbestos have caused meso? Yes.

18 Dr. Attanoos doesn't do that. He starts off out
19 the gate, well, baby powder didn't have asbestos. But
20 he didn't even look at any of the testing. He didn't
21 look at any peer-reviewed literature dealing with this
22 product. He didn't even look at Blount. Blount's
23 peer-reviewed. That deals with Johnson's baby powder.
24 That showed asbestos in Johnson's baby powder. He
25 didn't look at that.

1 He looked at peer-reviewed literature dealing with
2 Italian non-asbestos-containing talc. And despite what
3 Mrs. Brown said, the rats weren't injected with
4 Johnson's baby powder from Italy. It wasn't the same
5 grade. It was not Johnson's Italian baby powder. And
6 it was not -- any of the studies that he relies on,
7 they're Italian, non-J&J mines, they're
8 non-asbestos-containing talc. It's not the product at
9 issue here. You can't draw the correlation.

10 Finally, as your Honor pointed out, there's
11 nothing to draw the other leap that he makes. The
12 first leap that he makes is from -- you know, he says
13 it's an unfounded assertion that baby powder didn't
14 have asbestos.

15 The second leap that he makes that he's got no
16 support for is to somehow say, well, her mesothelioma
17 was not only caused by asbestos, it was caused by age
18 and genetics, because he admittedly says you would need
19 testing to confirm that, you would need testing to give
20 that opinion, and he admitted he's done no testing
21 here. So I don't know how he can say her meso was
22 caused by age and genetics with no foundation at all.
23 It's unreliable.

24 Basically, what we have here is Dr. Attanoos wants
25 to say anything but asbestos caused this lady's meso,

1 but really I didn't even look to see if she was exposed
2 to asbestos. That's basically what we have.

3 THE COURT: I understand.

4 All right. You know, what I've done in the past
5 is to come down on the side of saying it's a battle of
6 the experts, and, you know, that's what it's going to
7 be. But I am deeply concerned about this testimony of
8 Dr. Attanoos.

9 MS. BROWN: And, your Honor, if it alleviates some
10 of the Court's concern, as counsel again raised this
11 idea he's going to opine on what's in asbestos, we will
12 not solicit an opinion from him that baby powder does
13 not have asbestos. That is not his area of expertise,
14 and he's not going to come in and talk about it.

15 MR. SWETT: But that forms the whole basis of
16 where he starts with that premise.

17 THE COURT: But he is going to say that her
18 mesothelioma was not caused by Johnson & Johnson baby
19 powder. He's going to say that?

20 MS. BROWN: Yes, your Honor, based on the
21 epidemiology of women who get peritoneal mesothelioma
22 who have no --

23 THE COURT: Again, I've read those articles, not
24 only his, but the citations he gives for the statements
25 he makes, and I've got to say it's the most attenuated

1 stuff in the world. His opinion is by far the most
2 affirmative suggestion excluding baby powder as a
3 source than any of the sources in his studies that he
4 talks about that talk about gender and the impact that
5 gender has on peritoneal mesothelioma, and that's what
6 gives me great concern.

7 And when he's asked about it, and I noticed this a
8 couple times in his deposition, he'll say, well, they
9 didn't say exactly that, but that's the inference from
10 what they say.

11 Nobody says it definitively like he does that --
12 first of all, that 70 percent of peritoneal
13 mesotheliomas are caused by something other than
14 asbestos. Nobody says it that way. He puts together a
15 group of observations to come up with that statement,
16 and I have found no one else who says -- and I can sure
17 stand to be corrected, but I have found no one else who
18 says, about a specific situation like this one, this
19 mesothelioma could not have been caused by asbestos and
20 could not have been caused by baby powder.

21 That's what's got me worried is taking him all the
22 way to the end to the definitive, acceptable degree of
23 medical certainty, expressing those opinions, when the
24 literature he uses is a much more general discussion of
25 statistics that doesn't take the final dive he takes

1 and express the opinion he expresses.

2 MS. BROWN: And I would just suggest to the Court
3 to the extent your Honor is inclined to consider this
4 further, is to look at footnote 12 on page 15 and 16 of
5 our brief, which cites the studies that I think may
6 give the Court comfort that it's just not Dr. Attanoos
7 who's saying, well, this had nothing to do with
8 asbestos, but this is here published literature in
9 addition to his own peer-reviewed work that has studied
10 women who get this very rare peritoneal mesothelioma,
11 have asked them, interviewed them about asbestos
12 exposure, looked at lung fibers and concluded that
13 their mesothelioma was unrelated to asbestos.

14 And so the extent your Honor wants to look at
15 the -- you know, what he's relying on, I would point
16 the Court to that footnote.

17 THE COURT: I understand.

18 MS. BROWN: Thank you, Judge.

19 THE COURT: Well, all right. I will tell you
20 this. My current inclination is to limit very
21 extremely what Dr. Attanoos can say. I will try to
22 make a final determination about that and e-mail all of
23 you about it as quickly as I can. But I am very, very
24 reluctant to allow him free rein to express the opinion
25 he expressed in the report from his office he made on

1 Beth-Anee Johnson where he flat-out says that her
2 mesothelioma cannot be caused by asbestos and that
3 Johnson & Johnson baby powder does not contain
4 asbestos.

5 Those two things are worrisome to me in terms of
6 whether he has got the expertise and uses a scientific
7 method that is recognized, is using peer-reviewed
8 material that expresses that opinion, all those kinds
9 of normal indicia that experts must use.

10 I'm not saying -- I'm not slamming the door to him
11 right now, but I am deeply concerned about that --

12 MS. BROWN: Understood, your Honor.

13 THE COURT: -- and I will try to clarify my
14 thinking in the next couple of days.

15 MS. BROWN: We appreciate that.

16 THE COURT: The thing you just handed me, which,
17 obviously, I haven't had a chance to completely study,
18 but I appreciate you bringing it to me, I will study
19 that in detail before I make any determination about
20 this, and I will try to give you something on that
21 quickly.

22 MS. BROWN: We appreciate that, Judge. And to the
23 extent it helps take some work off your plate, I know
24 one of the things you said you're concerned about is
25 he's going to get up there and say baby powder doesn't

1 have asbestos, and we won't elicit that testimony.

2 THE COURT: I understand, and I appreciate that,
3 and that helps me considerably in how I evaluate what
4 I'm going to do here.

5 MS. BROWN: And I would also say no, he doesn't
6 have to say the word spontaneous. His opinion --

7 THE COURT: I understand.

8 MS. BROWN: -- is not based on asbestos.

9 THE COURT: Yes, ma'am. And that may be the way
10 to solve this problem because I don't want to simply
11 deprive -- this is a clash of the experts without
12 regard to what happens here. And y'all have experts
13 who have very different opinions about this, and I
14 don't want to prevent from you from being able to put
15 your case on in that regard, but I don't want to
16 violate the injunction of *Watson vs. Ford Motor Company*
17 and other cases from South Carolina that make it clear
18 that the judge has the responsibility to look on the
19 front end to see whether this expert is within a field
20 of expertise with the kind of scientific foundation,
21 peer-reviewed methodology that makes these a legitimate
22 expression of expert opinion. That's what's got me
23 concerned.

24 MS. BROWN: Understood, your Honor. Thank you.

25 THE COURT: Okay. Let's see what else we've got

1 here. That was seven. And I think that's the end of
2 the -- seven was the end of the plaintiffs motions in
3 limine.

4 MR. SWETT: Yes, your Honor.

5 THE COURT: All right. Now, have we got --
6 Johnson & Johnson, have we got separate motions in
7 limine?

8 MR. HERNS: Yes, ma'am, your Honor.

9 THE COURT: All right. Tell me where to look,
10 Louis.

11 MR. HERNS: It's in the large notebook, Johnson &
12 Johnson motions in limine.

13 THE COURT: I see replies to plaintiffs motions in
14 limine. J&J motions in limine, Longo, omnibus and
15 punitive damages. Is that the one you're looking at?

16 MR. HERNS: Yes, ma'am.

17 THE COURT: Okay. Now, what time are we?

18 Court reporter, we're going to take a little
19 break.

20 Let's -- I always keep mine so fast, but what is
21 it, about 11:05? Why don't we be back here at 11:20 or
22 thereabouts, so we all may be refreshed, and we'll go
23 again.

24 (WHEREUPON, a recess was taken from 11:03 a.m. to
25 11:22 a.m.)

1 THE COURT: Before I leave this issue of
2 Dr. Attanoos, I am looking at the document that bears
3 the date April 6th, 2019, Richard L. Attanoos, Boverton
4 Park House, Boverton Park Drive Vale of Glamorgan in
5 Wales. And this is an opinion letter to Lucy Wilson,
6 Willcox & Savage, Norfolk, Virginia, Re Beth-Anee
7 Johnson.

8 And I am looking at a summary and opinion, and I
9 am going to list for you the paragraphs in the opinion
10 that give me the most concern so that you may know what
11 I'm thinking about as we depart here today.

12 Page 16, the paragraph -- the second paragraph on
13 the page: The epidemiological evidence correlating
14 time trends, incidents by gender, and commercial
15 asbestos use indicate that a significant portion of
16 pleura in almost all of the peritoneal mesothelioma in
17 women in the United States appear unrelated to
18 asbestos, citing Price, McGawfcar (phonetic) -- whom I
19 certainly remember very well from the Bostic trial --
20 and Attanoos.

21 I do not find that opinion to be -- at the moment
22 to be sufficiently reliable for Dr. Attanoos to express
23 that opinion.

24 This contrasts -- the next paragraph: This
25 contrasts with pleural mesothelioma arising in men as

1 epidemiological and mineralogic studies show commercial
2 amphibole asbestos causes the majority of diffuse
3 malignant pleural mesotheliomas in males. This is
4 usually from occupational sources of exposure.

5 As those two opinions are juxtaposed with each
6 other, I do not find them reliable.

7 With respect to -- page 17, paragraph 4 on the
8 page: With respect to chrysotile asbestos, Ms. Johnson
9 details a history of potential exposure to various
10 building products which may have contained chrysotile
11 asbestos, including but not limited to drywall, joint
12 compound and siding.

13 I do not find that to be reliable enough to be an
14 opinion he can express, nor do I find it consistent
15 with the evidence as I know it at the moment.

16 Then the paragraph that begins: With respect to
17 malignant mesothelioma and chrysotile asbestos, I will
18 state epidemiological studies have shown that exposure
19 to chrysotile presents a risk of pleural mesothelioma
20 only when chrysotile or is contaminated with tremolite
21 asbestos or other amphibole asbestos and that the risk
22 even under those conditions is very low and is due to
23 the degree of contamination and so forth through the
24 rest of that paragraph, citing McDonald and Liddell.

25 And, finally, on that page in paragraph 3 from the

1 bottom, it says: Epidemiological studies do not show
2 that chrysotile causes malignant peritoneal
3 mesothelioma.

4 I do not find that that is a reliable summary of
5 the epidemiological studies that I know of from the
6 material submitted to me in this case.

7 And then on page 20, the third paragraph on the
8 page: Given the latent period for mesothelioma and so
9 forth.

10 The next paragraph: Accordingly, this evidence
11 indicates that Johnson & Johnson cosmetic talcum
12 powder, a product sourced from Italy and Vermont, did
13 not contain asbestos.

14 The next paragraph: On the basis of the
15 epidemiology, mineralogical evidence, clinical studies
16 and animal toxicological studies, any exposure to
17 Johnson & Johnson talcum powders, including Johnson &
18 Johnson baby powder that Ms. Johnson may have had,
19 would not pose a risk for her peritoneal mesothelioma.

20 I find that those paragraphs are not supported by
21 any reasonable expert confidence on Dr. Attanoos' part,
22 nor the kinds of scientific evidence, peer-reviewed
23 studies and whatnot that would support his ability to
24 opine in that way.

25 And then, finally, the paragraph: Accordingly,

1 even if Johnson & Johnson talcum powder brands contain
2 cosmetic talc from mining sources which in themselves
3 contained trace elements of asbestiform, mineral, or
4 non-asbestiform, amphibole fragments, the overall
5 effect on human disease and specifically in
6 mesothelioma induction is inconsequential and
7 de minimis because consistently no mesotheliomas are
8 observed in the epidemiological or clinical studies of
9 heavily exposed subjects or even high-dose
10 toxicological animal studies.

11 And continuing on the next page, 21, the next
12 paragraph: For consumers exposed to Johnson & Johnson
13 talcum powder, such as baby powder via infrequent
14 exposures, the cumulative dose would be orders of
15 magnitude below the levels experienced in the talc
16 miners and millers.

17 I do not find that that paragraph has any basis in
18 the scientific material that has been cited in
19 Dr. Attanoos' report.

20 The next paragraph: Any exposure to Johnson &
21 Johnson talcum powder brands and baby powder that
22 Ms. Johnson may have had would not pose a risk for her
23 peritoneal mesothelioma.

24 I do not find that he is able to express that
25 opinion to a reasonable degree of scientific or medical

1 certainty.

2 And the paragraph on page 21, the last paragraph
3 starts: The scientific literature also indicates that
4 a significant and often substantial portion of the
5 mesotheliomas have no identical asbestos exposure for
6 malignant mesotheliomas not clearly attributable to
7 some proven external agent. The term spontaneous or
8 naturally occurring mesothelioma has been used. This
9 comprises some 60 to 90 percent of female mesothelioma
10 cases and the fraction of spontaneous or naturally
11 occurring mesotheliomas are the highest in North
12 American women with extrathoracic mesothelioma, citing
13 himself 2018.

14 I do not find that there is sufficient scientific
15 support for the expression of that opinion by
16 Dr. Attanoos in court.

17 And finally: In summary, I consider, based on the
18 information available with a reasonable degree of
19 medical certainty that -- it says "Mr. Johnson," but
20 I'm sure it's a typo. It's Ms. Johnson's malignant
21 peritoneal mesothelioma was of a spontaneous or
22 naturally occurring neoplasm which arose unrelated to
23 any prior asbestos exposure.

24 I do not consider that Dr. Attanoos has the
25 sufficient scientific background or sufficient

1 information from the literature or from the information
2 about Mrs. Johnson's malignant peritoneal mesothelioma
3 to make this -- to testify as to this conclusion to a
4 reasonable degree of medical certainty.

5 Now, that is currently what I'm thinking, but I'm
6 not -- as I've said before, I'm not closing the door
7 completely, but I wanted -- rather than do some kind of
8 e-mailing back and forth, I just felt the simple thing
9 to do was to list out the paragraphs that give me the
10 most concern about the medical report, because the
11 bottom line is that's what we've got to deal with,
12 that's the kind of -- the preview or outline of
13 Dr. Attanoos' testimony.

14 MS. BROWN: And, your Honor, I understand your
15 concerns about the reliability of those opinions.
16 Would it be helpful and could we, with the Court's
17 indulgence, submit a short submission with the
18 underlying scientific data --

19 THE COURT: That's exactly what I'm inviting you
20 to do. That's why I felt, in fairness -- and, of
21 course, it also gives the plaintiff a chance to look
22 over this medical opinion one more time and say
23 whatever they want to say as well.

24 MS. BROWN: Sure thing. Thank you, your Honor.

25 THE COURT: But, obviously, we're on a short

1 string, but the sooner you can deal with that the
2 better so that we can see where we are.

3 MS. BROWN: Yes. Thank you, Judge.

4 THE COURT: Now, we are at J&J's motion in limine,
5 Dr. Longo.

6 MS. BROWN: That's me, Judge.

7 THE COURT: All right, ma'am.

8 MS. BROWN: Back again.

9 I'll be short, your Honor. I know we have been
10 doing a lot of motions this morning, and you have heard
11 from Dr. Longo in the past, and we have made this
12 motion in the past. And so certainly we raise three
13 issues in our motion relating to grounds to exclude
14 Dr. Longo.

15 Your Honor is well familiar with Dr. Longo's
16 methodology, which he admits by using TEM, the type of
17 microscopy, he is unable to distinguish between
18 asbestos and non-asbestiform. And I will submit, your
19 Honor, we will leave that argument on the papers. We
20 will leave our argument on PLM, another type of
21 microscopy that he uses, on the paper as well.

22 But what I do want to raise with the Court is
23 something your Honor hit on this morning and I think
24 you have been concerned with in some of the other
25 trials, and that has to do with some of the province of

1 where these bottles came from that he tests and what he
2 does with the information in some of the testing of
3 bottles that were bought off of eBay or given by a
4 plaintiff's lawyer or, you know, things like that and
5 that come from time periods, your Honor, that have
6 absolutely nothing to do with the alleged usage in this
7 case. And so I would focus our oral argument here on
8 Dr. Longo's sort of extrapolation. And there are sort
9 of two points to that, your Honor.

10 So as I understand your Honor's ruling in some of
11 the previous trials, you were concerned about the fact
12 that some of these bottles were purchased off of eBay,
13 were with plaintiffs' lawyers before Dr. Longo tested
14 them, came from places without a proper chain of
15 custody --

16 THE COURT: I'll stop you right there and say
17 this: I understand now that Dr. Longo has done some
18 revision of his presentation and has used 72 samples
19 that are taken from the historic records or files of
20 J&J.

21 I certainly could solve that thing by saying
22 Dr. Longo can express opinions only based on the
23 material from the J&J records and not from these
24 bottles off of eBay or produced by plaintiffs' lawyers.
25 I always did have a little bit of heartburn about that,

1 and I don't mind making that ruling.

2 I see my friend is standing there wanting to say a
3 little something.

4 MR. FINCH: Yes, your Honor. This relates to one
5 test. Dr. Longo did two types of tests. One, he
6 tested Johnson's baby powder to determine if there is,
7 in fact, asbestos in it.

8 THE COURT: Right.

9 MR. FINCH: He did that from -- initially, he did
10 that from bottles supplied to him from multiple
11 sources. And then more recently he has done that from
12 both bottles of Johnson's baby powder from the
13 historical either repository or from museums and also
14 from Imerys talc mines.

15 There is one -- another test that he does, which
16 is called the below-the-waist fiber release test, which
17 your Honor let us use in the Boyd -- both of the
18 Boyd-Bostic trials. That is based on one of the
19 bottles that he got from a collector at the Kazan firm,
20 which has been the subject of -- what it is, is it has
21 a certain amount of asbestos in it. He uses that to do
22 fiber release testing just as if he had a piece of
23 Kaylo from an unknown providence and he says, what's
24 the fiber release from Kaylo?

25 His opinions about what's the amount of asbestos

1 fiber that come from a container of cosmetic talcum
2 powder which has asbestos in it is based on that
3 particular study and based on the Gordon Millette
4 article involving a different cosmetic talcum powder
5 that shows fiber release. And he has a range of
6 exposures based on that, taking into account the
7 possibility --

8 THE COURT: Right. In the Gordon Millette, I
9 don't have a problem with that. I mean, they don't
10 like -- they fuss about Dr. Millette and his hands
11 on --

12 MS. BROWN: Well, it's not J&J. But that's cross,
13 I understand, Judge.

14 THE COURT: I don't have any heartburn about the
15 Gordon Millette.

16 MS. BROWN: Right.

17 THE COURT: But I do have a little concern about
18 the below-the-waist because it uses those other sources
19 that -- frankly, I guess I'm trying to protect you from
20 yourself a little bit. I would think that appellate
21 review would have a little more concern about the chain
22 of custody with those in this situation. With these
23 others, there can be no question about it.

24 MR. FINCH: I understand that, your Honor. But
25 the fact of the matter is, it's what's in our record.

1 Now, there are some subsequent testing he has
2 done, which is not yet available that we can't use in
3 this trial that would not be a chain of custody issue.
4 But for the purposes of the below-the-waist video, you
5 let us testify to that and also play the video in both
6 Boyd-Bostic trials.

7 THE COURT: I get that. I let Dr. Attanoos go
8 wild in the Boyd-Bostic too, and I've given some
9 thought to all of that.

10 MR. FINCH: So we would just say that this is no
11 different than -- in terms of the extrapolation
12 argument, this is no different than -- and we cited
13 this in our paper -- when Berman and Middleton does
14 tests on asbestos-containing joint compound, they don't
15 know where it came from, and they show what's the fiber
16 level of that.

17 Dr. Longo has some asbestos-containing talcum
18 powder that happened to come from Johnson & Johnson.
19 He said this is what the fiber release is of this kind
20 of thing that has asbestos in it, and the rest is
21 fodder for cross-examination, I would submit, your
22 Honor.

23 THE COURT: Well, here is kind of the way I'm
24 looking at this thing, and correct me if I'm wrong. I
25 don't want to make a ruling on an assumption that's not

1 correct, but the Gordon Millette -- the heart and soul
2 of what you want out of the below-the-waist is how
3 these fibers release, and that leads to how respirable
4 they are and --

5 MR. FINCH: And the range of exposure.

6 THE COURT: And it makes a lot of sense. I mean,
7 opposing counsel doesn't love this very much, but, you
8 know, it's one thing when you are breathing in a rawer
9 form of asbestos in an industrial or commercial setting
10 as it's, you know, being thrown about in the workplace
11 and so forth. But it is another thing -- and this is
12 what I think Longo's point is, when you -- what you're
13 breathing in may be much lower content of asbestos in
14 it than in a commercial setting, for example.

15 MR. FINCH: Yes, your Honor.

16 THE COURT: But it's so much more respirable, at
17 least that's his argument, because of the very, very
18 ground-up nature of it and the silky platform upon
19 which it moves into the system of respiration, which is
20 the talc, it's the played talc itself. That's what I
21 have devined out of what he's trying to say. That you
22 that could you get out of Gordon Millette just as easy
23 as you can get out of below-the-waist. You just don't
24 have that beautiful, little film with the dark -- and
25 that and the Tinsley lighting and all that, I think

1 that's fine. I don't think there's anything wrong with
2 that, and I'd let it in with no problem about that.

3 What I'm trying to do is not go into evidence that
4 relies on the bottles that are not as verifiable as
5 these are that they're J&J.

6 MR. FINCH: Well, here's the issue, your Honor.
7 He has two foundations for his opinion about what is
8 the fiber release from asbestos-contaminated talc
9 powder. One is the peer-reviewed Gordon Millette
10 paper. The other is his own below-the-waist testing.

11 THE COURT: Sure.

12 MR. FINCH: The third is testing that is not at
13 issue in this case because it has not been produced to
14 the defendants yet.

15 So as long as he can give the opinion, I have
16 tested Johnson's baby powder and I believe it contains
17 asbestos because of the historical samples I got from
18 the company, and as long as he is not precluded from
19 giving an opinion, based on my review of information
20 both in the peer-reviewed literature and elsewhere, it
21 is my opinion the range of asbestos exposure associated
22 with using cosmetic talcum powder is .1 fibers per cc
23 to 1 fibers per cc.

24 THE COURT: Right.

25 MR. FINCH: If that is permissible, then I don't

1 need to --

2 THE COURT: I'm cool with all that. What I'm
3 saying we ought not to use in this trial is the actual
4 film, the below-the-waist film.

5 MR. FINCH: If that is what your Honor is getting
6 at -- as long as we don't get sandbagged when I've got
7 Longo on the stand and say, Oh, no, he can't testify to
8 his exposure estimate because below-the-waist video and
9 below-the-waist container is out --

10 THE COURT: Yeah, they're not going to do that.
11 If I say it's out, they're not going to refer to it.

12 MR. FINCH: But I want to make sure that it's in
13 that he can give an exposure estimate --

14 THE COURT: He's going to be able to give the
15 exposure estimate because that's platformed on a lot
16 more than just that film. It is platformed on all of
17 his other studies that he has done.

18 All right. So that's the way I would solve our
19 problem here. Number one, I would say no information
20 about the cans of baby powder that are more problematic
21 in terms of who they came from, where they came from,
22 how old they were and so forth and so on. So you use
23 the J&J supplied material.

24 And two, no showing the below-the-waist film.
25 That's how I would solve your Longo issue.

1 MS. BROWN: And I have a couple of points of
2 clarification. It would be not only just the video,
3 but the underlying study. Meaning, we're not talking
4 about this can from the '40s that came from a
5 plaintiff's lawyer's dad and he did --

6 THE COURT: No. And he's cool with that. He
7 wants to be able to give that range of particles and
8 all that kind of stuff, which comes from a lot more
9 than just those old cans in the '40s. And it certainly
10 comes from a lot more and different material than that
11 film in the blackened room with the Tinsley light. So
12 I think we understand each other.

13 MS. BROWN: Understood, your Honor.

14 And I would just address, they have another
15 expert, an industrial hygienist, who relies on
16 below-the-waist. And similarly, that opinion would be
17 out under your Honor's ruling. He needs to rely on
18 Gordon or the published literature as opposed to what
19 your Honor has now excluded.

20 THE COURT: Well, and I think they can adjust it
21 the way that they need to.

22 MR. SWETT: Well, one point of clarification, your
23 Honor. An expert witness is certainly able to rely on
24 inadmissible evidence.

25 THE COURT: Well, that's true. That's true. All

1 right. Let me revise that.

2 All right. The other expert can rely on stuff
3 that's not in evidence, studies that are not in
4 evidence.

5 MS. BROWN: Well, your Honor, then let me, if I
6 could briefly, sort of raise the prejudice issues with
7 this below-the-waist. The very reason why your Honor,
8 I believe, is excluding it via Longo --

9 THE COURT: The only way it's prejudicial is that
10 it used those old cans, and I'm just trying to be
11 consistent there, but all the rest of the reason why
12 you say it's prejudicial, oh, that Tinsley light is
13 terrible, oh, it shows -- in that darkened room, that's
14 not a fair way. I disagree with that. I think all
15 that's perfectly fine.

16 I think the other expert can refer to studies that
17 show that without describing it in such a way that it
18 gets into Dr. Longo and his below-the-waist studies.
19 They'll figure out a way to do that.

20 MR. SWETT: Here is the issue, your Honor. I
21 think we're in agreement. You're allowing Dr. Longo to
22 testify about his range. He's not going to talk about
23 the underlying study and the below-the-waist.

24 THE COURT: That's right.

25 MR. SWETT: Our other expert, who is an industrial

1 hygienist, is just going to rely on that range to do
2 his calculations.

3 MS. BROWN: But, Judge, if that's going to happen,
4 then I have to cross on below-the-waist. I mean --

5 THE COURT: Well, then you open the door, my dear,
6 it's going to be open.

7 MS. BROWN: I understand. But, I mean, if someone
8 is going to get up and rely on this can from Italy --

9 THE COURT: I give you a little bit, and if it's
10 not enough, you're just going to have to make that
11 determination.

12 MS. BROWN: But just to revisit that, Judge, why
13 the second expert shouldn't be allowed --

14 THE COURT: I think the second expert can say, I
15 rely on the range that Dr. Longo -- I'm going to allow
16 Dr. Longo to testify as to the range. If what he or
17 she, whoever it is, is going to say is, I rely on that
18 range to then give my opinion, I'm going to allow that.
19 If you want to get into below-the-waist, then, you
20 know, that's your choice.

21 MS. BROWN: Understood, your Honor.

22 And then just for the record, then, to finish the
23 arguments that are in our brief --

24 THE COURT: Sure. And they're preserved. To the
25 extent I haven't completely granted what you asked for,

1 your position is preserved.

2 MS. BROWN: Okay. On extrapolation, Dr. Longo, of
3 course, is taking a couple of fibers that he claims to
4 find and without any reliable method or any reliable
5 science assuming that that is indicative of the entire
6 bottle.

7 THE COURT: Exactly. That's why you-all don't
8 like Millette's glove thing. I mean, I get that, but
9 you'll be able to cross-examine fiercely on that.

10 MS. BROWN: Understood, your Honor.

11 And, finally, just a point that I think counsel
12 agree and has via e-mail correspondence, the plaintiffs
13 in this case did not put Dr. Longo up for a deposition.
14 They have not given him any Johnson-specific
15 information, and so I would just ask for guidance from
16 the Court per their agreement that Dr. Longo not be
17 giving any opinion as it relates to Ms. Johnson and her
18 exposure here having not been offered, he didn't do a
19 report in this case, and they wouldn't put him up for a
20 deposition here. And so I just want to clarify with
21 the Court that he's restricted to his testing and not
22 to any opinions about Ms. Johnson.

23 MR. SWETT: I disagree with the characterization.
24 Myself and Mr. Hens had an agreement where they didn't
25 need to depose Dr. Longo, we didn't need to depose

1 Dr. Hopkins, but --

2 THE COURT: I'm not restricting Dr. Longo about
3 talking about Beth-Anee Johnson's case.

4 MR. SWETT: And the agreement was basically -- the
5 range is basically what we're talking about. Dr. Longo
6 is going to testify that using -- an individual using
7 Johnson's baby powder, such and such would have this
8 range of exposure.

9 THE COURT: That's right.

10 MR. SWETT: I mean, that's basically --

11 THE COURT: I'm going to allow him to do that.

12 MS. BROWN: And based on below-the-waist? The
13 range is going to be based on below-the-waist?

14 MR. SWETT: It's going to be based on all of his
15 testing, including the peer-reviewed literature. I
16 thought we just agreed on that, that it can be based on
17 everything he's done.

18 MS. BROWN: I understood your Honor to be
19 excluding below-the-waist from the range.

20 THE COURT: No, no. I'm excluding you showing
21 that test and referring to it in that way, but the
22 ranges are in part a product of that below-the-waist,
23 but they're also in part a product of other -- what you
24 think are kind of off-the-wall sort of studies he's
25 done. But I'm going to let him give the range. I'm

1 just not going to let him dramatize it by --

2 MS. BROWN: With the video.

3 THE COURT: With the video.

4 MS. BROWN: Understood, your Honor.

5 THE COURT: Okay?

6 MS. BROWN: Thank you.

7 THE COURT: And all the other things you wish I
8 would do about Dr. Longo --

9 MS. BROWN: Are in the papers for your review.

10 THE COURT: That big, huge hunk of paper that
11 would exclude him or limit his opinions, I'm not going
12 to do that.

13 MS. BROWN: Understood. Thank you.

14 THE COURT: Now, number 2 is the omnibus.

15 MR. HERNS: Yes, your Honor. Louis Herns on
16 behalf of Johnson & Johnson.

17 THE COURT: Yes, Louis.

18 I'm just trying to get here where I'm -- okay.

19 Any reference to other cosmetic powder litigation,
20 I will grant that.

21 MR. HERNS: Other talc powder litigation. We have
22 agreed to that, your Honor. Plaintiff's counsel will
23 not agree -- will agree not to mention other lawsuits.

24 THE COURT: Absolutely.

25 MR. HERNS: But we can use past lawsuits for

1 impeachment purposes.

2 THE COURT: Certainly. And we're always pretty
3 careful about how we do that so that we don't
4 inadvertently mention the name of a case or something.
5 We just call it a sworn statement or things of that
6 nature. We try not to say testimony given in another
7 case or anything like that. But yes, you will be
8 protected about that.

9 MR. HERNS: Number 2 is prohibit any reference to
10 media reports about litigation.

11 THE COURT: Absolutely. That would be granted.
12 No question about it.

13 MR. HERNS: We agreed about that.

14 We could not agree about number 3, any reference
15 to adverse reactions to talcum powder that are not at
16 issue in this case.

17 THE COURT: What are we talking about, like
18 ovarian cancer? Other types of cancer?

19 MR. HERNS: Yes, ma'am.

20 THE COURT: You know, there's always this debate
21 that they have. It's about notice. You know, Johnson
22 & Johnson says, we didn't know, or this material
23 doesn't cause any kind of badness because there's no
24 asbestos in it and it doesn't cause cancer.

25 I certainly think they're going to have to be

1 mighty careful here. I agree with you, Louis, that the
2 prejudicial effect may outweigh the probative value,
3 depending on how far they go, and I don't want this to
4 be a trial of every claim that's been made against
5 Johnson & Johnson for every kind of cancer.

6 But they do have the right to investigate and
7 illustrate to the jury the issue of notice, when
8 Johnson had notice, the fact that they knew their
9 product was causing certain things.

10 Certainly, it's not evidence that they were sued
11 for that, and you could never put that in front of a
12 jury. I don't know what else they may have that would
13 cause other cancers, like ovarian cancer or something,
14 from Johnson & Johnson products to be in a format where
15 it's admissible evidence, but I'm not going to say
16 right now I would completely exclude anything, but
17 they'd have to be mighty, mighty careful.

18 And if that comes up, Mr. Swett, that y'all see
19 that -- feel like you need to raise something along
20 those lines, you know, of other kinds of cancer, then
21 let's have a sidebar about that when the piece of
22 evidence comes up so that I would be sure that we're
23 not tying it to, hey, they have been sued about
24 something before. That would not be proper.

25 MR. FINCH: That wasn't our intent. Our argument

1 is basically two points.

2 May I approach so I can be -- can you hear me,
3 your Honor?

4 THE COURT: I can. I got the hearing aids tuned
5 up pretty good.

6 MR. FINCH: Okay. So our argument is, basically
7 it's the fact that Johnson & Johnson was on notice of a
8 potential ovarian cancer problem and they're
9 investigating their talc is no different than in a
10 mesothelioma case that a defendant was on notice of the
11 fact that breathing asbestos can cause a problem.

12 THE COURT: You don't need to go further. I get
13 that argument, and I don't want to completely preclude
14 you, but how you're going to present why they were on
15 notice is what I'm inquiring about because they're not
16 going to be on notice if it's just the fact that they
17 were sued or even that a verdict was rendered.

18 MR. FINCH: No, no, this has nothing -- this goes
19 back 40 years.

20 THE COURT: That's some kind of evidence out of
21 their files or --

22 MR. HERNS: It has to do with a different disease.
23 We're talking mesothelioma with Ms. Johnson, her
24 breathing in, allegedly, asbestos dust in baby powder
25 and then ovarian cancer that comes in --

1 THE COURT: Generally gotten by use of talcum
2 powder as a feminine hygiene product. I get there is a
3 different way of entry into the body of the material,
4 and I've got some sensitivity to that.

5 So, again, I will have to see what they're talking
6 about. My inclination is not to let it be done, but
7 I'm not going to close the door until I see is there
8 some document out of their files or something that I
9 think constitutes notice fairly enough and related
10 enough.

11 So what I'm telling you is I'm not going to close
12 the door completely, but I'm very hesitant to let other
13 scary kind of diseases, like ovarian cancer, get into
14 the picture unless I see a piece of evidence that I
15 think is fairly admissible in this case.

16 MR. HERNS: Thank you, your Honor.

17 MR. SWETT: And just way of example, your Honor,
18 we attached -- most of it's going to be internal
19 documents. There is a question-and-answer document
20 from 1985 where Johnson & Johnson prepared these
21 questions and proposed answers to media if any of these
22 questions came up. And the fact that they were
23 preparing answers for questions like, you know, talc
24 has been linked to cancer in this journal, to ovarian
25 cancer, and there's questions like, well, what's the

1 relationship between talc and ovarian cancer? And then
2 talc is closely related to asbestos. Is it likely the
3 two react in the same way?

4 So that's certainly from their internal file --

5 THE COURT: I know. And if we get to the point
6 where you're going to offer that into evidence, I'm
7 going to want to take a real good look at the document
8 before I make it on the basis of this motion in limine.

9 MR. FINCH: Also, if I understand your Honor's
10 ruling, if in some way the --

11 THE COURT: Right now I'm not granting his motion
12 in limine. So y'all need to just kind of cool it for a
13 minute. But I'm telling you that I'm not going to
14 permit this to just go to the jury until I have a
15 chance to look at the specific thing you're talking
16 about. You got me?

17 MR. FINCH: Yes, your Honor.

18 THE COURT: Okay. All right.

19 MR. HERNS: Number 4, your Honor, we have reached
20 an agreement. Mr. Swett is not to highlight the
21 accessory minerals noted on the notice or knowledge
22 documents --

23 THE COURT: Excellent.

24 MR. HERNS: -- and so that was not an issue.

25 Number 5, any references to foreign regulatory

1 actions, including Health Canada, Mr. Swett has agreed
2 not to reference the Health Canada draft screening
3 assessment, nor will he reference foreign regulator
4 actions in his opening or closing.

5 Number 6, any reference to irrelevant cosmetic
6 talc products containing asbestos that plaintiff was
7 not exposed to, including Claire's makeup. Mr. Swett
8 has stated he will not reference the FDA findings
9 concerning Claire's makeup, but we would like to be
10 able for Dr. Sanchez to give some general background
11 information about talc, not associating it with
12 Mrs. Johnson, but just give some background information
13 as to how talc is used and has been used.

14 THE COURT: I don't have any problem with that,
15 and he did that before, so I don't think that would run
16 afoul of this.

17 MR. SWETT: The only clarification on my agreement
18 with the Claire's and Justice, finding asbestos in
19 those products, there is one document that I'm not
20 going to move it into evidence, but I want to use it as
21 a demonstrative document.

22 As you know, there is an issue in this case.
23 Dr. Hopkins will say that the FDA doesn't regulate
24 talc; the FDA could have withdrew it if there was any
25 asbestos in it. Well, there is an FDA document which

1 in and of itself is a hearsay exception. It's
2 Statement from FDA Commissioner, Director of the Center
3 for Food Safety and Applied Nutrition, on tests
4 confirming a 2017 finding of asbestos contamination in
5 certain cosmetic talc products and new steps that FDA
6 is pursuing to improve cosmetic safety. That's dated
7 March 2019, this year.

8 There are statements in this document. I don't
9 intend to put it in front of the jury, but this just
10 happened last Friday in a trial --

11 THE COURT: I haven't looked at it yet, so my
12 ruling is going to be Claire's makeup is out. If
13 there's some FDA document, and that FDA document is
14 kind of late in the game, in my view, but I'll take a
15 look at it. So I'm not going to rule on this document
16 right now.

17 MR. SWETT: Right, your Honor. I just want to
18 clarify, I did make an agreement with Mr. Herns, but it
19 did not include what I was trying to just clarify. It
20 didn't include being able to cross-examine Hopkins.
21 For example, in this document, the FDA says: We don't
22 regulate talc. We can't remove a talc product from the
23 market if it contains asbestos.

24 That's directly relevant in this case. And that's
25 the only admissions from the FDA I wanted to use with

1 Dr. Hopkins.

2 THE COURT: I gotcha. And that doesn't have
3 anything to do with what we've been talking about, so
4 that's fine. We'll fight that battle when we come to
5 it.

6 All right. Below-the-waist, I have taken that
7 out.

8 MR. HERNS: That's been addressed.

9 Number 8, any reference to any alleged defect or
10 litigation concerning Johnson & Johnson non-talc
11 products. We're in agreement with that, and Johnson &
12 Johnson will not reference any actions it took
13 addressing the issues with non-talc products.

14 THE COURT: Great.

15 MR. HERNS: Number 9 has been addressed. That was
16 addressing plaintiff's P535, improperly going after
17 demographic characteristics. That's the Hispanics and
18 the African-Americans. We have already addressed that.

19 THE COURT: Yeah, but I'm going to say this:
20 We've talked about the admissibility of that document.
21 But any reference to preying on people of color, being
22 a racist or a sexist corporation or anything like that,
23 as you know, is not something I would permit one bit.

24 MR. HERNS: Yes, ma'am.

25 THE COURT: So that would be way, way a bridge too

1 far.

2 MR. HERNS: The last one, number 10, exclude all
3 internal Imerys and Cyprus documents and testimony.
4 The history is in 1988, Johnson & Johnson sold the
5 Windsor talc mines to Cyprus mines. The mines were in
6 Vermont. There has been no relationship between Imerys
7 and J&J. They're distinct and separate entities with
8 their own corporate beings, and at no point has Imerys
9 or Johnson & Johnson been married at the hip. They
10 have had no corporate relationships with one another.

11 Johnson & Johnson had no control over the input or
12 drafting of the documents that Imerys made, and they do
13 not contain any statements made by Johnson & Johnson.
14 They're internal documents of Imerys only and squarely
15 hearsay pursuant to Rule 802. The statements do not
16 fall under any exception to the hearsay rule. In order
17 to be a party opponent exception, it's got to be the
18 party opponent.

19 THE COURT: I agree, and I tell you what. I was
20 kind of nervous in the service about the Imerys and
21 Cyprus documents in Boyd-Bostic, but I justified it on
22 the basis they were a party at the commencement of the
23 trial. And, therefore, I allowed it as party
24 opponent-type documents. They are out now.

25 MR. HERNS: They're out now.

1 THE COURT: Mr. Swett.

2 MR. SWETT: Your Honor, I've got two Imerys
3 documents, the only two that we sought to admit in this
4 case. They fall squarely within hearsay exceptions.

5 THE COURT: What are they?

6 MR. SWETT: I have copies, your Honor. I can
7 bring them up. You have previously allowed these in.
8 P5 and P14.

9 Your Honor, I can argue the basis of admissibility
10 when you're ready.

11 THE COURT: All right. Tell me about it.

12 MR. SWETT: Your Honor, Plaintiff's Exhibit 5 is a
13 lab report. This is a dispute between -- Johnson &
14 Johnson owned Windsor Minerals. This is when they
15 owned Windsor Minerals. It's a dispute between Windsor
16 Minerals and the Illinois EPA. Cyprus came in and
17 tested the mines, Johnson & Johnson's mines, and they
18 found tremolite asbestos in the mines.

19 So, one, it's offered for non-hearsay purposes.
20 It's offered for notice. Johnson & Johnson can't say
21 they didn't have notice of this. They were involved in
22 this dispute. This is a dispute between their mines.
23 They certainly knew about this.

24 But, regardless, if it's hearsay, it falls
25 squarely into the hearsay exception under 803(16),

1 ancient document exception. It's 20 years or older.
2 It's of apparent authenticity because it's right out of
3 Cyprus' files, and we have got the Cyprus corporate
4 representative, Pat Downey, who authenticates this
5 document. We have got that deposition. We can play
6 that deposition in court to authenticate this document
7 if we need to.

8 It's also a business record of Cyprus. We have
9 Pat Downey admitting that in this deposition. So this
10 document falls squarely within a hearsay exception, and
11 it's very relevant in this case because this is Johnson
12 & Johnson's mines that Cyprus found asbestos in.

13 THE COURT: All right.

14 MR. SWETT: The second document --

15 THE COURT: How about 14?

16 MR. SWETT: The second document is again an
17 ancient document, falls within 803(16), more than
18 20 years old. It is from Imerys' files. You know,
19 Dr. Hopkins has testified he's familiar with this
20 document. He's been cross-examined with this document
21 multiple times now in court. I have done it in every
22 trial I have been in. It basically shows that they
23 were on notice that there is asbestos in the
24 Hammondsville mine and the Argonaut mine. Those are
25 the mines that the asbestos came from for the baby

1 powder. All we need is one hearsay exception, and we
2 have got the ancient document exception.

3 THE COURT: So you also add to this, this was the
4 mine from which their product was sourced, and you're
5 saying that Dr. Hopkins, the corporate representative
6 of J&J, is familiar with this document and familiar
7 with the analysis contained of the material that was
8 supplied to his company from these mines?

9 MR. SWETT: Yes, your Honor. He's testified about
10 this document in every trial. His response is -- he
11 has no response to the Hammondsville, but he says the
12 Argonaut mine in here, the East Argonaut wasn't the
13 mine that the talc came from. He differentiates. But
14 still he's familiar with this document and it falls
15 within a hearsay exception.

16 MS. BROWN: Your Honor, if I could, there's
17 something a little bit unfair here. He's familiar with
18 the document because plaintiff's counsel has shown it
19 to him. This is not a document that plaintiffs have
20 any evidence that ever went to Johnson & Johnson in the
21 ordinary course. This is a document that they have
22 taken from another company's files who is not present
23 in this case to explain or contextualize or give any
24 testimony about this document, and they put it in front
25 of Hopkins, and that's the only reason he has seen it

1 before.

2 THE COURT: Are you saying that with respect to 14
3 and 5 or just 14?

4 MS. BROWN: Yes, your Honor. No evidence that
5 either of those documents ever went to Johnson &
6 Johnson. And Imerys isn't here. What's different
7 about this case than the Boyd-Bostic cases is no one is
8 here to get up and explain or contextualize.

9 THE COURT: With respect to the Windsor mines, J&J
10 owned those mines, so --

11 MS. BROWN: Up until 1989, correct, your Honor.

12 THE COURT: Right. So the document -- the first
13 one, P5, comes in.

14 MS. BROWN: Understood.

15 THE COURT: P14 --

16 MR. HERNS: We had sold the mine in '88, your
17 Honor.

18 THE COURT: Uh-huh. Were you still using material
19 from that mine? Yes.

20 MS. BROWN: Yes, they were our supplier, Judge.
21 But in terms of the internal company documents that
22 were made after we sold it, that never went to us. How
23 would we know --

24 THE COURT: Well, that's going to depend on what
25 Hopkins says. So I'm going to reserve ruling on that

1 one. 5 comes in. 14 is questionable. Let's see what
2 Hopkins says.

3 MS. BROWN: If they can lay a foundation with
4 Hopkins.

5 THE COURT: That's right.

6 MS. BROWN: Understood.

7 MR. SWETT: Well, your Honor, just for
8 clarification on 14, we're not offering that for
9 notice. That is a separate hearsay exception. That is
10 a business record and it's an ancient document. It
11 doesn't matter if Johnson & Johnson was aware of it.

12 THE COURT: Yeah, but -- this Windsor mine one,
13 number 5, they owned it at that time. It's their
14 business record. They didn't own this mine at this
15 time.

16 MR. SWETT: Right, but they were -- that was --
17 the talc that they were using for the baby powder was
18 being supplied from that mine.

19 THE COURT: I understand, but did they know about
20 this report? Was it in their records?

21 MR. SWETT: It doesn't matter because we're not
22 offering it for notice. We're offering it as a
23 separate hearsay exception for the truth of the matter
24 asserted that these mines did have asbestos in them.
25 We have an exception for that.

1 THE COURT: Are you just going to get it in as an
2 ancient document?

3 MS. BROWN: There's no foundation, Judge. They
4 need to lay foundation for the witness. That's the
5 problem without Imerys.

6 MR. SWETT: I have the Pat Downey deposition.

7 MS. BROWN: You have to authenticate. That
8 doesn't lay foundation to use this document.

9 THE COURT: No. There is a difference in that.
10 All right. But I'm not going to get into those -- I
11 have already told you what I'm going to do. I'm going
12 to look and see what happens when we try this case.

13 5 is in. 14 is probably in, but I'll wait and see
14 what happens foundationally when we get there.

15 Okay. So number 10, I think we have resolved all
16 we need to resolve about 10, because the two documents
17 we're talking about that 10 refers to are the ones that
18 are up here right now.

19 MR. SWETT: That's the only ones, your Honor.
20 That's all the Imerys Bates-stamped documents that we
21 intend to --

22 THE COURT: I gotcha.

23 MS. BROWN: All right.

24 THE COURT: Gotcha. Okay.

25 Now, what else have we got, Louis, in terms of

1 J&J? We got Longo. We did omnibus and punitive
2 damages.

3 MR. HERNS: Yes, your Honor. That's the last one.

4 THE COURT: Hang on.

5 MR. HERNS: Your Honor, we're going to rest on the
6 papers for the motion to strike punitive damages. And
7 I understand that you will bifurcate punitive damages
8 during the course of the trial.

9 THE COURT: Right. You got your -- your position
10 is preserved and on the record, which is that you would
11 like to strike punitive damages. I decline to strike
12 them at this time. I think that would be premature.
13 But I will bifurcate, just as I have done in the past.
14 That means we will not discuss anything -- the only
15 thing that will be said in the first part of the trial
16 on liability is the jury will be voir dired on the
17 verdict form and asked to -- if they find any liability
18 on the part of J&J, then they will be asked whether the
19 conduct was willful, reckless or wanton. And if they
20 say yes to that, and only if they say yes to that, will
21 we proceed. But they will not otherwise be instructed
22 about punitive damages and everything.

23 You are very familiar with that methodology. And
24 that's how I will do it. And to the extent you want
25 something further, you put it in this motion. Your

1 position is protected.

2 MR. HERNS: Thank you, your Honor.

3 THE COURT: All right. So we have got that.

4 Now, have we done everything in J&J?

5 MR. HERNS: I believe so, your Honor.

6 THE COURT: Now, y'all have got -- Louis has
7 supplied me with a trial -- a confidential trial memo
8 and verdict form and --

9 MR. HERNS: Voir dire.

10 THE COURT: -- voir dire. And I'm not going to go
11 through all the voir dire right now.

12 Y'all are very familiar with how I charge these
13 things. We will try to have a little charge conference
14 before we get started here.

15 Thank God we're trying this thing in Richland
16 County, due to my years, but it will be quick because
17 y'all pretty much know what I do about voir dire.

18 Plaintiff has submitted more detailed voir dire
19 where they want me to pin the jury down on their
20 attitudes about whether they could find a company like
21 J&J -- whether they believe that they could ever find
22 if they had asbestos in their baby powder and this kind
23 of thing. I don't get that specific and try to nail a
24 jury down.

25 As both sides know, I will try to ask them some

1 general questions to determine whether or not they can
2 be fair. And I will have those up for y'all and Walker
3 will distribute them to you before we select the jury.
4 I try to get them out to you by e-mail. And then if
5 y'all have got some heartburn about them, you can take
6 a look at them, and we can talk about them before we
7 select the jury.

8 What else do we need, Mr. Swett?

9 MR. SWETT: I have two more issues. May I just
10 approach with our pretrial materials?

11 THE COURT: Yes, sir.

12 MR. SWETT: I've got plaintiff's final witness
13 list, plaintiff's proposed voir dire, plaintiff's page
14 and lines, our final exhibit list, and our verdict
15 form.

16 THE COURT: Wonderful. And thank you for giving
17 me a hard copy. I saw them in your e-mail.

18 And can I depend upon you, Louis, to get me that
19 material, or is it in what you handed me?

20 MR. HERNS: Yes, ma'am. I will get you that
21 material and have it ready to go, probably send it to
22 you this week.

23 THE COURT: Okay. Now, I'm looking at this final
24 witness list and -- well, it looks like you're staying
25 within the lines that we talked about, Mr. Swett,

1 numbers-wise and time-wise.

2 I'm going to be a little fiercer than I've been in
3 the past about keeping everybody to timelines and, you
4 know, trying to move this thing along. As you-all
5 know, you don't have a three-week judge and you don't
6 have a four-week judge. You've got a two-week judge.
7 And I feel fully confident that we will get this matter
8 resolved in that time frame, if by any chance a miracle
9 does not occur and y'all settle this case.

10 MR. SWETT: There's one issue that sort of relates
11 to that that we have been trying to work on is -- you
12 know, if you remember the last trial, we had some
13 admissions that you allowed us to play so that we don't
14 take so long with Dr. Hopkins. They agreed to those,
15 you know, short video clips, and we agreed to let them
16 bring Dr. Hopkins out of turn and put him -- basically,
17 do their direct of him in our case, and then we
18 cross-examine him one time instead of calling him as an
19 adverse witness, then putting him up in our case and
20 cross him.

21 So we're trying to work on that. I think he's
22 available Thursday. We would be willing to allow them
23 to put him on the stand out of turn with an instruction
24 to the jury very early on Thursday. They do their
25 direct, we'll cross him, we'll finish Hopkins on

1 Thursday.

2 THE COURT: That's great. I think that makes a
3 lot more sense, and I certainly think it makes more
4 sense to the jury when you do it that way.

5 MS. BROWN: And the only reason I haven't
6 finalized that with Mr. Swett, we're waiting to confirm
7 with Dr. Hopkins himself, but we believe that will be
8 the day.

9 THE COURT: That would be highly satisfactory if
10 it can be done that way. Okay.

11 MR. SWETT: The only other issue, your Honor, I
12 think -- you know, we're trying to streamline
13 everything today so we don't have to worry about it at
14 trial. We had a list of documents we're seeking to
15 preadmit. I don't know if I gave a copy of that.

16 THE COURT: Yes.

17 MR. SWETT: I think there's only a handful of
18 objections. If we can go ahead and maybe rule on those
19 and I can put that in the record so we have all that
20 straightened out.

21 THE COURT: All right. I'm looking at it. So
22 which ones have we got any dustup about?

23 MR. SWETT: I don't know yet, but as they're
24 announced, I can give you a copy.

25 MS. BROWN: So, your Honor, the first one to

1 address is Plaintiff's Exhibit 31.

2 THE COURT: Hang on. Plaintiff's Exhibit 31.

3 MS. BROWN: Two brief objections to this document.

4 Number one, this document is not complete. And so
5 what you're seeing is something that was taken out of a
6 much larger 20 or 25-page document.

7 And so I object, one, on the fact that it's not a
8 complete document. But, two, what the entire document
9 makes clear is that this is a document about mines in
10 Korea, India, Brazil, Austria and Kashmir that were
11 used to supply other places around the world and have
12 no bearing on the issues in this case regarding U.S.
13 talc.

14 And so I would submit, one, it's incomplete, and,
15 two, there would be an attempt by plaintiffs to use
16 what they're saying about these other worldwide sources
17 to mislead or confuse the jury that that had anything
18 to do with what was going on in Vermont and Italy.

19 MR. SWETT: Your Honor, this document applies
20 worldwide. They're saying worldwide. They even
21 reference their Windsor mines. As this document --
22 Hopkins has laid the foundation that this document is
23 from 1978. In 1978, they had, quote, no control system
24 to prevent asbestos contamination at levels detectable
25 by TEM in our finished product worldwide.

1 MS. BROWN: And, your Honor, that is just belied
2 by --

3 THE COURT: Well, here is what the thing says: 65
4 percent of our product worldwide is made from U.S.
5 sourced, Windsor mine, WMI, talc.

6 And then it goes on: In the U.S., and Italian
7 sourced talc, we have excellent long-term audit
8 information.

9 So I think this document speaks for itself. I
10 think it's got something in it for both sides. I will
11 overrule the objection. It's admitted.

12 MS. BROWN: And, your Honor, can it be admitted in
13 its complete form? We're missing, like, 25 pages.

14 THE COURT: If y'all want to junk up this record
15 with something the jury is not going to read, you can
16 do that, but I'm not dealing with that right now. I'm
17 just dealing with this. This comes in. Y'all can
18 decide what you want to do with the rest of it.

19 MS. BROWN: I understand, Judge.

20 The next one would be Plaintiff's 87.

21 THE COURT: 87?

22 MS. BROWN: Yes, Judge.

23 THE COURT: All right.

24 MS. McVEY: Chief Justice, may I interrupt for
25 just a second? Are you going to take a lunch break

1 before we reach Sizemore, do you think? I'm just
2 wondering if --

3 THE COURT: Yes, I have to. I'm sorry.

4 MS. McVEY: That's all right. You-all can keep
5 going. I just want to know if the rest of us can sneak
6 out.

7 THE COURT: Well, yeah. What time is it?

8 MS. BROWN: 12:15.

9 THE COURT: Oh, man. How many have we got?

10 MR. SWETT: It looks like only four or five, your
11 Honor.

12 THE COURT: We will be back here at 2:15 or
13 thereabouts.

14 MS. McVEY: Yes, ma'am. Thank you. Sorry for the
15 interruption.

16 THE COURT: All right. Keep going.

17 MS. BROWN: Plaintiff's 87.

18 THE COURT: All right. I got it.

19 MS. BROWN: My objection here, your Honor, has to
20 do with a little bit of what we discussed this morning,
21 which is this idea of other injuries not involving
22 those claimed in this case.

23 And so what this document clearly, by the subject
24 line, is talking about is the risk of aspiration in
25 kids. And what happened around this time, 1966, there

1 was an issue with the cap on baby powder, and it led to
2 two changes: One, a warning went on the product about
3 children dumping it close to their face and they could
4 choke, and two, J&J changed the top to make it safer
5 for kids. But the prejudice of using this document to
6 suggest that talc is dangerous when it talks about
7 something completely different that's not at issue in
8 this case, and therefore we object on the prejudice
9 grounds and irrelevant.

10 THE COURT: Overruled. Admitted.

11 What's the next one, Mr. Swett?

12 MS. BROWN: I had two objections, your Honor, to
13 the Blount article. I understand your Honor's prior
14 ruling is that the article itself goes back to the
15 jury.

16 THE COURT: What exhibit is it?

17 MS. BROWN: I have two. And what Mr. Swett
18 identified is 157 and 158.

19 MR. SWETT: This is the Blount article from
20 Johnson & Johnson's own files with the cheat sheet on
21 the back, your Honor, the key. They want to keep it
22 out.

23 THE COURT: All right. And it's got that key that
24 everybody keeps worrying about. I understand the
25 objections. Overruled. Admitted.

1 MS. BROWN: And, your Honor, on 158, it also has a
2 Cyprus fax, which would be another basis of the
3 objection on 158. Looks like there is a fax contained
4 in the back, which I would object to as hearsay.

5 THE COURT: Overruled. Admitted.

6 MS. BROWN: Along those same lines, 361, objection
7 on hearsay to a letter from Alice Blount.

8 THE COURT: I remember that one.

9 Overruled. Admitted. I mean, frankly, the best
10 thing you've got going for you is that video, they feel
11 like they've got to play it. She doesn't come off very
12 good on that one, so y'all have a little on your side.

13 MS. BROWN: Yes, Judge.

14 Final, Judge, would be 413.

15 THE COURT: Which one?

16 MS. BROWN: 413.

17 I just don't -- I don't know if this is something
18 Mr. Swett printed off the Internet. This has never
19 been authenticated. I just don't even know what it is
20 or what it purports to be.

21 MR. SWETT: Your Honor, if you look at the bottom,
22 this is --

23 THE COURT: This is USGS.

24 MR. SWETT: -- self-authenticating, specific
25 hearsay exception for a governmental document. It's

1 relevant because it shows that -- I think this is the
2 one that shows occurrence of asbestos in the Vermont
3 talc mines. And Dr. Sanchez will testify all the
4 Vermont talc mines, the mineralogy is similar. So the
5 fact that they found anthophyllite asbestos here in the
6 Vermont talc mines is definitely relevant in this case.

7 MS. BROWN: Just for the record, this is the
8 Chester talc mine. No question in this case the
9 Chester talc mine was ever used for cosmetic talc, and
10 I would object on the prejudice of attempting to
11 suggest this stands for something that's not at issue
12 in this case.

13 THE COURT: I understand that this is being
14 offered because of the testimony of Dr. Sanchez, who is
15 a principal witness of defense. Dr. Sanchez is going
16 to testify, just like he has when I've heard him
17 before, that all these Vermont talc mines are of the
18 same composition, and they want to introduce this USGS,
19 that is, U.S. Geologic Survey, Department of the United
20 States Government, document to show that there is
21 anthophyllite asbestos and questionably actinolite
22 asbestos in the Carleton quarry, which is one of the --
23 which is the Chester talc mine. And it's in Windsor
24 County, Vermont, like the Windsor talc mine is, so they
25 are introducing it for that purpose.

1 I consider that an appropriate purpose, and I will
2 overrule the objection and admit it.

3 MS. BROWN: Understood, your Honor.

4 That's all the objections.

5 MR. SWETT: So just for the record, your Honor, I
6 have a document that's entitled "Plaintiff's Exhibits
7 Pre-Admitted" that I'm going to mark maybe or add to
8 the record.

9 And just for the record, all of these are admitted
10 by consent with the exceptions of P5 was admitted over
11 objection, P31 was admitted over objection, P87 was
12 admitted over objection, P157 was admitted over
13 objection, P158 was admitted over objection, P361 was
14 admitted over objection, P14 the Court is reserving
15 ruling on, and the remaining approximately 65 exhibits
16 have been pre-admitted by consent.

17 Is that correct?

18 MS. BROWN: Correct.

19 MR. SWETT: I'll mark this as an exhibit when I
20 get a clean copy, your Honor.

21 THE COURT: Mine are going to reflect that same
22 thing now.

23 Okay. Is that it?

24 MS. BROWN: Yes, your Honor.

25 THE COURT: Are we done with J&J?

1 MR. SWETT: Do we happen to know which courtroom
2 we're going to start in, your Honor?

3 THE COURT: I will find that out, and hopefully I
4 will do a better job of finding that out and not lead
5 you astray, because you will want to work through Jim
6 Truitt to get set up the way you'd like to be set up.

7 Thank God this isn't Darlington County anymore. I
8 think we'll have an easier time of setting up the
9 technology, and certainly facility-wise it's going to
10 be easier by far than what we dealt with with those
11 poor people in Darlington that still don't have a
12 decent courthouse.

13 MR. SWETT: I apologize, one really last issue.
14 We don't have to deal with it now, but I want to raise
15 it. We had filed way back when -- I'll get you the
16 exact date.

17 March 20th we filed in the Devay and Dupree cases
18 motion to consolidate. Johnson & Johnson replied to
19 those motions on April 16th. So that is ripe. And I'm
20 not going to argue the motion right now, but I did
21 anticipate that maybe we would argue it today because I
22 don't know if we have another opportunity before the
23 July trial, especially in light of the fact that they
24 removed all those cases saying they were similar enough
25 to be overseen by one judge.

1 THE COURT: Yes, I saw your comment on that. And
2 I think, in fairness to J&J, that deserves some
3 ventilation. And we'll try to figure out a time to
4 make that happen before any July trial on it, although
5 I am very attracted to the idea of consolidation, as
6 y'all know. But I want them to be fully heard about
7 that, so we'll figure out a time convenient to all to
8 make that happen. And I'm not going to make any
9 prejudgment about these cases until I have taken a look
10 at them and given -- J&J just filed something with me,
11 didn't you, Louis?

12 MR. HERNS: Yes, ma'am.

13 THE COURT: On opposing consolidation. I want to
14 have a chance to look at that, and then we'll schedule
15 some time to deal with that.

16 MR. SWETT: Thank you, your Honor.

17 MR. FINCH: Thank you, your Honor.

18 MS. BROWN: Thank you, your Honor.

19 THE COURT: Okay. And where would we consolidate
20 them?

21 MR. SWETT: Your Honor, they are both pending in
22 the same venue, Charleston County.

23 THE COURT: Okay. Just to give me some kind of
24 heads-up as to what I would be looking at if I did and
25 how that could work down there.

1 MR. HERNS: July in Charleston is not a good
2 thing.

3 THE COURT: It's good for me because that's when I
4 start going to the beach for about a month, my beach
5 out at IOP, so I love it.

6 Okay. We'll come back on the rest of Sizemore and
7 Hopper.

8 Are there Hopper folks that are still here? Okay.
9 I haven't forgotten about you. We're going to get to
10 you, I promise. All right. Thank you.

11 (Lunch recess taken from 12:25 p.m. to 1:27 p.m.)

12 THE COURT: Are we ready to proceed on Sizemore?

13 MS. McVEY: Yes, ma'am.

14 THE COURT: We have dealt with the motion for
15 summary judgment, so now we're to plaintiff's motions
16 in limine; am I right?

17 MS. McVEY: Yes, your Honor.

18 THE COURT: Plaintiff's motion in limine number 1,
19 collateral source.

20 MR. McLEOD: Is this the omnibus motion?

21 THE COURT: Yes.

22 MR. McLEOD: Your Honor, just to make things a
23 little simpler, we will stipulate to 1, 2, 3, 4, and
24 10.

25 MS. McVEY: And 10?

1 THE COURT: And 10?

2 MR. McLEOD: (Nods head.)

3 THE COURT: All right. So that was number 5, that
4 any corporations which once made, manufactured, sold or
5 distributed asbestos are in bankruptcy. I would grant.

6 What's the problem?

7 MR. McLEOD: It's the same as it always is. We
8 agreed not to use the term bankruptcy, but to the
9 extent that there's any -- we have some affidavits to
10 bankruptcy trust in this case that we --

11 THE COURT: I gotcha. Well, overruled. Granted.
12 All right. Any reference to any rulings by
13 another court on the scope of admissibility of
14 testimony of any witnesses.

15 Why aren't we granting that, Mr. McLeod?

16 MR. McLEOD: Your Honor, same as we always do,
17 just to the extent that they open the door to it to
18 bolster the credibility of their own witnesses, we
19 would --

20 THE COURT: Well, they're not going to do that.
21 They're going to qualify them as an expert, so it's
22 granted.

23 Any questions to experts to define causation. I
24 would grant that. We don't ever let the experts give
25 the instructions to the jury, but we do allow them to

1 testify as to causation. That's what experts do. So
2 that's granted.

3 Any mention or reference to the other defendants
4 not present sued by the plaintiff. That's the *Smith*
5 *vs. Tiffany* issue that we continue to be in
6 disagreement about. Granted.

7 MR. McLEOD: As long as it's on the record that
8 it's over our objection.

9 THE COURT: Over your objection. No question
10 about it, Mr. McLeod.

11 Felonies and convictions not involving dishonesty
12 or moral turpitude.

13 MR. McLEOD: We have actually got a larger stand
14 on its own motion on this, so I suggest we wait, pass
15 on this.

16 THE COURT: Just defer on this.

17 All right. Past alcohol use, we have agreed.
18 Tobacco use or smoking. Well, he smoked. I don't
19 allow them to ask questions about, hey, you didn't obey
20 the warnings on cigarette packages, so no warnings
21 wouldn't be any good. I know y'all would like to
22 pursue that. I would grant.

23 MR. McLEOD: Over our objections, of course. We
24 think we should be allowed to go into that. And to the
25 extent that tobacco use goes to life expectancy, it's

1 relevant to the case.

2 THE COURT: I agree. I understand your argument,
3 and I will grant the motion.

4 Other nonlife-threatening medical conditions.
5 There isn't any person who will testify that any of
6 this other stuff caused his death, so I would grant.

7 MR. McLEOD: Over objection.

8 THE COURT: Over objection.

9 Asbestos generally as the cause of Mr. Sizemore's
10 mesothelioma. That's what the experts say. That's
11 what the medical experts say.

12 MR. McLEOD: Well, your Honor, that's not
13 necessarily true, but in this case, I don't believe
14 that we're contesting the diagnosis.

15 THE COURT: Okay. Very good.

16 Any mention of asbestos use being patriotic,
17 winning the war. Well, nobody has ever done that. I
18 would grant that.

19 And any mention of any asbestos-related lawsuit
20 filed by the decedent of the plaintiff. Well, Smith
21 and Machin govern that. I know the defendants
22 disagree. I would grant over their objection.

23 MR. REID: Your Honor, if I may just touch on that
24 one.

25 THE COURT: Certainly, Mr. Reid.

1 MR. REID: And we can wait until trial to craft
2 how we do this, but Mr. Sizemore did have a 2000 or
3 1999 asbestosis suit. And we don't need to go into the
4 details there, but the testimony will be used.

5 THE COURT: Testimony can be used. We always
6 figure out a way to do that that masks any reference to
7 other litigation. But I'm certainly not going to
8 preclude the use of testimony that's under oath from
9 him even if it was in another matter. That can be
10 done.

11 MR. REID: Thank you for the clarification.

12 THE COURT: All right. That's the first one.

13 Then this is number 2, plaintiff's motion in
14 limine to exclude evidence defendant lacked knowledge
15 asbestos caused mesothelioma.

16 What are we talking about?

17 MR. McLEOD: Are you going to go?

18 MR. BRANHAM: I'm happy to follow you.

19 MR. McLEOD: This is the same motion. This was
20 filed in, Taylor, Jolly, Waters, Glenn. The Court has
21 routinely rejected this. Whether or not these
22 defendants were aware goes directly to the facts of
23 case. It's a question of fact for the jury.

24 MR. BRANHAM: Over our objection, your Honor.

25 THE COURT: All right. Denied over their

1 objection.

2 Three.

3 MR. REID: Your Honor, just -- counsel and we
4 agreed we would keep it short. I think most of these
5 are offered by the Court's past rulings, and this is
6 one I think the parties will agree that we're not
7 contesting compliance with OSHA is conclusive. We're
8 contesting it's relevant, and I think they will rely on
9 their brief.

10 MR. BRANHAM: True.

11 THE COURT: So --

12 MR. REID: The Court has permitted this in the
13 past.

14 THE COURT: Yes, that's correct. So I deny.

15 Four, plaintiff's motion in limine to exclude
16 improper comments and questions by defendants and their
17 witnesses. All those things are things I would not
18 allow. Background asbestos is fine, but none of the
19 specifics about them breathing it, there's asbestos in
20 the courtroom, you have it in your lungs, at risk,
21 fibers in common household products. I would grant
22 with regard to that.

23 Five.

24 MR. BRANHAM: They just have to have evidence of
25 what they're going to say?

1 THE COURT: Yeah, you will make an offer of proof.
2 So granted, which simply means that they are not
3 precluded, but they have got to make an offer of proof
4 that shows that they've got --

5 MR. BRANHAM: There's going to be plenty of
6 evidence of other asbestos.

7 MR. McLEOD: It's not really an issue.

8 THE COURT: No big deal here.

9 Six.

10 MR. REID: I think this is one you routinely
11 denied, your Honor.

12 THE COURT: That's right. Denied. They want to
13 exclude unduly speculative and unreliable opinion
14 testimony related to evidence. And the kind we're
15 talking about is the reconstruction, safe level,
16 potency, literature.

17 Seven.

18 MR. BRANHAM: Judge, this is one we actually do
19 disagree about and we need to argue about a little bit.

20 So the motion here is to exclude criminal history
21 of Mr. Sizemore. To just give you a little bit of
22 background, as the Court knows, Mr. Sizemore was
23 deposed over a total of about ten days. He was asked
24 on a couple of different occasions, if memory serves,
25 whether he had been convicted of anything. And he

1 actually said yes to a number of things. I think one
2 was assault and that sort of thing.

3 Then there was -- and I think it was right at the
4 end of the deposition where he was asked if he had ever
5 been convicted of conspiracy. And he said no, and he
6 was adamant about it. And the defendants had some
7 record that they showed him and he again denied it.

8 And so just for completeness sake, and I
9 understand it's not in the record, but what Calvin told
10 me was, he said, I think that was my brother, but it
11 was not me. I mean, he was very serious about it not
12 being him. And the fact that he had admitted to other
13 criminal convictions in the past I think lends some
14 credibility to that issue.

15 But now what they're trying to do is somehow say,
16 well, he was convicted of a conspiracy, he didn't admit
17 it, we ought to be able to get that in in order to make
18 him look like a bad guy.

19 I don't think that's what the law of South
20 Carolina says. First of all, a conviction, as I
21 understand it --

22 THE COURT: It was more than ten years old?

23 MR. BRANHAM: It was more than ten years old. And
24 also conspiracy has not been defined as a crime of
25 moral turpitude. And so I think you have those two

1 things. And even if either one or both of those things
2 was not true, I think the Court still has the
3 discretion to look at it and say, is this relevant to
4 anything? Does it make him -- should it be admitted?
5 Is it more prejudicial? And I think it's clearly more
6 prejudicial, particularly when he was willing to admit
7 his other issues.

8 THE COURT: Mr. McLeod.

9 MR. McLEOD: I'll take this one, your Honor.

10 We disagree with the plaintiff's take on it.
11 First of all, it was conspiracy to obtain prescription
12 drugs. And it is inherently dishonest, so we disagree
13 entirely on their analysis that this particular
14 conspiracy doesn't involve dishonesty.

15 Importantly, the records that we have obtained say
16 that it happened in 1996. And in his deposition just a
17 few years later, he denied it but then later admitted
18 to it. And the same thing happened in the most recent
19 2016 depositions.

20 So not only does the actual conviction itself
21 represent dishonesty in the type of conspiracy that it
22 was, we're able to use this to impeach his telling the
23 truth in his deposition, which is inherently so
24 important in this case given all of the incredible
25 testimony that Mr. Sizemore gave. It just doesn't make

1 any sense, okay. He testified to being exposed to
2 insulation from a boiler the same year of this
3 conviction. The boiler wasn't even installed until
4 '86. And the record is replete that he was aware of
5 asbestos and the dangers of asbestos in the '80s.

6 So his credibility is at the heart of this case.
7 Not only is it admissible because it's a crime
8 involving dishonesty, it's also admissible because he,
9 right there in the deposition, he didn't tell the truth
10 about it. Or his statements are inconsistent, and
11 pursuant to, of course, Rule 32, we can use the
12 deposition for any purpose to impeach him on his
13 credibility.

14 So we think that this is not sort of the normal
15 situation because he wasn't -- according to the
16 transcripts, he wasn't honest in his deposition. And
17 given that we're talking about testimony, his testimony
18 is critical to the products that he's identified, the
19 products in our case that he hasn't identified, and so
20 his testimony is critical.

21 So because of that, the credibility of that
22 testimony is really outweighed by any prejudicial --
23 prejudice that it may cause to the plaintiffs. That's
24 our position.

25 MR. BRANHAM: Judge, again, I mean, I understand

1 why Mr. McLeod wants to use it, but I don't think
2 wanting to use it is good enough to be able to use it.
3 Right?

4 What he's trying -- I mean, in fact, when you
5 listen to what he says, he wants to be able to say our
6 client wasn't telling the truth when he said he didn't
7 remember Crosby products. So is that what we're trying
8 to do here? Because that doesn't make any sense.

9 But at the end of the day, we're more than ten
10 years old. The records in this case about where he
11 worked and what he worked on and things that he did
12 match up. So there really isn't the indicia of
13 untruthfulness to Mr. Sizemore.

14 He admitted to prior crimes. He said he didn't,
15 and I agree that it is inconsistent. So now the
16 question for the Court is: Is it something that should
17 be admitted because it is not unduly prejudicial? It's
18 your decision. You have the discretion to make this
19 decision, and I think if you look at the overall
20 prejudice from bringing in a conviction that he did
21 deny but isn't relevant to anything that's going on,
22 and there is nothing in South Carolina law that
23 establishes conspiracy as a crime of moral turpitude,
24 which is what's required in order to admit the
25 conviction.

1 THE COURT: All right. I'll grant it over
2 objection.

3 Nine -- 8, exclude reference to his children's
4 criminal history.

5 MR. McLEOD: We responded to both of those motions
6 together, your Honor. Our argument was strongest for
7 Mr. Sizemore because he was inconsistent in talking and
8 admitting he was arrested. So I presume if you denied
9 the first, you're going to -- or grant the first,
10 you're going to grant the second but over our
11 objection.

12 THE COURT: Granted over defendants' objection.

13 MR. BRANHAM: Judge, this next one is corporate
14 representative hearsay. I know we have talked about
15 this before, but there is -- I want to -- there's been
16 something that's come up in discovery that I just want
17 to point out to your Honor about why this is a proper
18 motion.

19 So Mr. Martin, who is Crosby's corporate
20 representative, has been testifying for a long time in
21 many cases saying: We were competitors with
22 Consolidated valves. We didn't use their valves and we
23 didn't sell their valves, and whatever they said to do
24 with their valves is different than what we did with
25 our valves. And this comes down in large ways to

1 whether you insulate the valves or not.

2 So we found a sales record demonstrating that
3 Foster Wheeler, which is a boiler manufacturer, was
4 purchasing Consolidated safety relief valves from
5 Crosby, which is directly contradicted by what
6 Mr. Martin has been testifying to in case after case
7 after case. He says it never happened.

8 And so now we know that to be untrue, that it, in
9 fact, did happen. And this is the reason why corporate
10 representatives cannot come to court and talk about
11 things about which they have no personal knowledge,
12 because he doesn't know. He just has learned that they
13 never sold Consolidated valves. Turns out that's not
14 true. And then when you confront him about it: Now
15 you agree you were selling Consolidated valves, right?
16 Because we have these invoices that shows you were.

17 And he's like: Well, I've never seen -- that's
18 the first time I've ever seen that, and I certainly
19 can't agree that as a matter of -- of course we were
20 doing it. Right?

21 So unless I can prove in every instance for every
22 year and every day of every year, he's never going to
23 admit that Crosby was selling Consolidated valves when
24 I have some evidence that they were and he has no
25 personal knowledge that they were not.

1 And so this is exactly the type of thing that
2 we're trying to get at with a corporate hearsay rule.
3 And you granted this before. This is not a new motion.
4 But he has to come here with personal knowledge. He
5 can't just make it up any more than Mr. Sizemore could
6 do it.

7 MR. REID: Your Honor, I was prepared before I
8 heard those specific comments to say something to the
9 effect that at the Glenn trial, we had no issue ever
10 arise in this respect with Crosby.

11 THE COURT: That's correct.

12 MR. REID: And I think it's best handled on a
13 question-by-question basis at trial. Even in light of
14 those comments, my position remains the same, and I
15 think the Court would be well advised to look at that
16 exhibit when it has a chance to see it.

17 What it is, is a purchase order from somebody else
18 from 1952 which uses the name Consolidated. I don't
19 know if it's because whoever wrote the purchase order
20 to Foster Wheeler is treating it like Kleenex or
21 something interchangeable with a Crosby valve, which is
22 elsewhere described on that invoice.

23 There's absolutely no proof that we ever had a
24 relationship with Consolidated. Mr. Martin has been
25 with Crosby since 1972 or '74. I can't remember

1 exactly the year he started, but he will testify: In
2 my term with the company, we've never had a
3 relationship with Crosby, and I think -- with
4 Consolidated. And I think it's best for the trial --
5 for the Court to hear that in context, hear it in the
6 context of the larger testimony which is given and make
7 a ruling on that sort of specific point at trial.

8 So this is one I would respectfully say either it
9 be denied and the Court can handle on it a
10 question-by-question basis, and if things pan out like
11 they did --

12 THE COURT: Well, this is targeted to a particular
13 issue, so I'll defer and look at the document before I
14 make a ruling on it. If it was kind of a generalized
15 thing, I would stick with what I've done in the past,
16 but you're talking about something very specific. So
17 let's just take a look at it. I'm fine with that,
18 Mr. Reid.

19 MR. BRANHAM: Thank you, your Honor.

20 MR. REID: Just to jump to number 10.

21 MR. BRANHAM: I don't think it's an issue.

22 MR. REID: We're not going to go there.

23 THE COURT: Withdrawn?

24 MR. BRANHAM: Yes, your Honor.

25 THE COURT: Number 11.

1 MR. BRANHAM: Judge, I don't think there is a
2 number 11. I think that's it.

3 THE COURT: This is an easy way to do it, just to
4 list the rulings that were made in these other cases.

5 Do we simply want to put that in the record and do
6 it that way?

7 MR. BRANHAM: I think that's fine.

8 MR. McLEOD: I don't know what she's looking at.

9 MS. McVEY: It's the list of prior rulings.

10 MR. McLEOD: Did I get that?

11 THE COURT: If you will look on the index to
12 motions in limine briefly ruled on by the Court in
13 prior cases, this is strike punitive damages from
14 plaintiff's complaint or bifurcate, is the first one.

15 Of course, I always bifurcate in the way that I
16 have enunciated.

17 MR. McLEOD: Your Honor, I hate to do this, but I
18 really think we need to go through each one and get the
19 objection on the record. It won't take long.

20 THE COURT: I'm going to bifurcate. Are you going
21 to object to that?

22 MR. McLEOD: To the punitive damages phase? No,
23 your Honor.

24 THE COURT: Second one is voir dire. I'm not
25 going to allow direct voir dire examination.

1 MR. McLEOD: We --

2 THE COURT: Are you asking for direct voir dire
3 examination?

4 MR. McLEOD: Your Honor, we would like to submit a
5 few questions for the Court to ask.

6 THE COURT: That's not what we're talking about
7 here. We're just talking about whether you -- the
8 lawyers have finally given up on that because they
9 understand South Carolina doesn't do that except in
10 death penalty cases and then in a very limited way.

11 This is asking the lawyers be allowed to directly
12 voir dire the jury. I have always denied that, and
13 that's what this is about.

14 MR. McLEOD: Are you -- just so I'm clear, are you
15 looking at the submissions on Ms. McVey --

16 THE COURT: I'm looking at the plaintiff's
17 notebook here. That's what I started out.

18 MR. McLEOD: I don't have that in front of me.

19 MS. McVEY: Yancey, I can give it to you.

20 MR. McLEOD: This is our motion in limine.

21 THE COURT: I haven't gotten to yours yet.

22 MR. McLEOD: Yes, ma'am.

23 THE COURT: I haven't gotten to yours yet. I'm
24 starting with the plaintiff's. And if you will look at
25 number 11 on page 2, which is where we are now, voir

1 dire. See number 2?

2 MR. McLEOD: Yes, ma'am, I see it.

3 THE COURT: These were two defendants who wanted
4 to directly voir dire potential jurors. I deny that.

5 MR. McLEOD: I'm not -- yes, your Honor. I
6 understand. We didn't --

7 THE COURT: She's just going down. She goes down
8 all of them. Some she loves; some she doesn't love.
9 This one she doesn't love. Plaintiffs always want to
10 directly voir dire the jury.

11 MS. McVEY: That is true.

12 THE COURT: I don't allow it for the plaintiffs.
13 I don't allow it for the defendants.

14 MR. McLEOD: I don't believe we asked for that in
15 this case, Your Honor.

16 THE COURT: Three, knowledge of trade
17 organizations. I always allow that. Y'all don't like
18 it.

19 All right. So I deny any motions that seek to
20 preclude argument on the imputation of knowledge of a
21 trade association to a defendant. I always allow
22 information about what trade -- the positions that
23 trade associations took, as you know. And y'all always
24 object to that, and you can preserve your position on
25 that right now.

1 MR. McLEOD: Sure, over our objection,
2 particularly when there's no evidence that the trade
3 organization had anything to do with our company or we
4 had knowledge.

5 THE COURT: I understand all that.

6 MR. McLEOD: Thank you.

7 THE COURT: Setoff settlements, number 4. I
8 always deny any motions about setoff. I'd rather
9 handle those post-trial by enforcing the provisions of
10 the Contributions Among Joint Tortfeasors Act of South
11 Carolina. So I don't do any separate determination
12 before trial starts in that regard.

13 MR. McLEOD: Yes, your Honor.

14 THE COURT: And I don't think y'all have any
15 problem with that. I think everybody prefers to have
16 it done that way.

17 MR. McLEOD: I think our motion that we made
18 stands on its own.

19 THE COURT: To publish the pleadings. Of course,
20 I always deny defendants' motions to publish the
21 pleadings to the jury because I think it is a backdoor
22 way of violating the provisions of *Smith vs. Tiffany* by
23 naming parties who are no longer parties to the
24 litigation because they settled or were dismissed.

25 And you object to that, so it's over your

1 objection.

2 MR. McLEOD: We object to that. In this case,
3 your Honor, in particular, he had a separate claim in
4 1999 that we believe ought to be able to be commented
5 on.

6 THE COURT: Right. And I think we settled that
7 hash some time ago.

8 MR. McLEOD: Over our objection.

9 THE COURT: Over your objection.

10 Governmental regulatory agencies. This is to
11 preclude experts from testifying about what the EPA and
12 OSHA and all those governmental agencies have to say.
13 And I, of course, always allow that information to come
14 into evidence. So I deny any defense attempt to
15 preclude reference to governmental regulations.

16 Reptile and the Golden Rule. I always grant
17 defendant's motions to prevent any use of Golden Rule
18 or reptile arguments, anything of that nature.

19 MS. McVEY: Your Honor, I understand the Golden
20 Rule. And, of course, we're not going to do that, but
21 I think sometimes defendants think that reptile extends
22 to conversations and questions to the corporate
23 representative about safety, about protecting workers,
24 about that kind of thing. I think --

25 THE COURT: It doesn't extend to that. The

1 reptile theory is an attempt to get the jury to place
2 themselves in the footprint of the plaintiff in the
3 action and ask the juror to be afraid or take a
4 community collective action, things of that nature.
5 That's what the Golden Rule is about.

6 The Golden Rule is not about knowledge and
7 activity of a corporate defendant in the face of
8 knowledge about a known danger. It doesn't extend to
9 that kind of thing, but it -- the reptile is just a
10 synonym for Golden Rule, as far as I'm concerned.

11 And, of course, I grant all defense motions to
12 enforce the Golden Rule and not allow any reptile
13 arguments.

14 MR. McLEOD: Your Honor, and I think the question
15 about, you know, safety such --

16 THE COURT: Safety is a different issue.

17 MR. McLEOD: The end user, and maybe our
18 employees, but when they start doing it geared to the
19 general public, I think it gets into --

20 THE COURT: No, they're very well aware of that.
21 I haven't had plaintiffs do anything about saying
22 you've got to be the voice of the public and you've got
23 to ensure that you as the jury will protect the public.
24 That doesn't happen in our trials, and it won't happen
25 in this one.

1 Diseases other than mesothelioma.

2 Mr. Branham.

3 MR. BRANHAM: Judge, this is the issue of when
4 they knew about asbestosis and the harm it can cause
5 and how it relates to the knowledge of hazards of
6 asbestos throughout history and knowing about the
7 hazards of asbestos and that it can create the disease
8 asbestosis is certainly relevant in proving the
9 knowledge of the hazards of asbestosis.

10 THE COURT: Right. In the past, I have denied any
11 attempt by defense to preclude any reference to
12 knowledge issues with respect to asbestos-related
13 diseases and when the company might have been aware of
14 them. So it's over the defendants' objection, but we
15 have allowed questions along those lines in the past,
16 and it's primarily come up in the records of the
17 companies about such things.

18 Number 9, products not at issue. And this is --
19 the big thing there is the use of catalogs and other
20 kind of corporate documents to indicate what kind of
21 products they sold and whether those products included
22 the specification of asbestos-containing product. I
23 always deny defendants' motions in that regard.

24 MR. REID: Your Honor, if I may just observe, I
25 think all the rest are about motions in limine --

1 plaintiff's opposition to motions in limine filed by
2 other parties.

3 THE COURT: They all are, but they all relate to
4 things that are a potential issue here, which is the
5 reason plaintiff listed them.

6 MR. BRANHAM: The idea is just to streamline it
7 because it's usually the same stuff over and over.

8 MS. McVEY: If they want to go straight to their
9 motions, I'm happy to do that. This is just a way to
10 encompass all of them, but whatever they want to do,
11 your Honor, or whatever you want to do.

12 THE COURT: All right. Then we'll quit doing
13 that. They insisted on going through them one by one.
14 Now they don't want to do that.

15 All right. Let's go to number 12.

16 Theile, what is it?

17 MS. McVEY: I don't know what they want to argue
18 on their motions in limine. I thought we encompassed
19 them all, so maybe the thing to do -- Yancey, tell her
20 what you want to do.

21 THE COURT: Let's get to their notebook on their
22 motions in limine. I don't want to spend all afternoon
23 long.

24 MR. McLEOD: I'm trying to streamline it as well,
25 your Honor. We don't need a notebook to know what the

1 Court ruled previously.

2 THE COURT: Well, what I do need is some kind of a
3 motions notebook from you that details your defense
4 motions. I have one from John Crane. All I've got
5 from you on motions in limine is your omnibus, which we
6 have taken care of. We have dealt with that. We just
7 got finished doing that, haven't we, or have we?

8 MR. McLEOD: We were starting to go through our
9 motions in the omnibus.

10 THE COURT: Okay. Then let's just do that. I'm
11 looking on page 2 of our omnibus.

12 One, use of the term poison or similar references
13 in front of the jury, kill, poison, to murder. I grant
14 that, but I caution you that it is perfectly
15 permissible for the plaintiffs to say that the
16 defendant died because of asbestos contained in your
17 products. But pejorative-type terms, like poisoned or
18 killed or murdered, have not been used by plaintiff's
19 counsel before, and I'm sure will not be used this
20 time.

21 So grant that, but understanding that the leveling
22 of the accusation that your defendant caused the death
23 of plaintiff is -- they are permitted to do that.

24 MR. BRANHAM: Just so that I'm clear, I know about
25 kill and murder, and that's fine. I had not heard the

1 inclusion of poison before. I mean, it is a toxin.

2 THE COURT: What you're going to say is the
3 defendant died of mesothelioma, and he contracted that
4 while breathing asbestos-laden materials placed in
5 equipment that Crosby manufactured.

6 MR. BRANHAM: Sounds like a good way to put it.

7 THE COURT: That's what he's going to say, and
8 that's perfectly legitimate. That's what he claims.

9 MR. McLEOD: If he wants to say in closing
10 statement to the extent the evidence at trial --
11 there's evidence that this --

12 THE COURT: Well, they're certainly not going
13 to --

14 MR. McLEOD: I mean, whatever the evidence at
15 trial is, your Honor, and the term poison we believe
16 is --

17 THE COURT: We have tried these cases many times.
18 The evidence is going to be conflicting.

19 MR. McLEOD: We believe it's prejudicial to use
20 that term.

21 THE COURT: To use which term?

22 MR. McLEOD: Poisoned.

23 THE COURT: Mr. McLeod -- I'm sorry. I'm getting
24 a little testy too.

25 I granted your motion on poison, killed, murdered

1 and all of that. Your motion is granted.

2 MR. McLEOD: Thank you, your Honor.

3 THE COURT: The only thing that I have cautioned
4 you is that they will be permitted to draw the
5 connection between the death of the plaintiff and
6 exposure to asbestos materials that were used in
7 connection with your client's products. That, I think,
8 is completely legitimate and that is how they have
9 always phrased it, as I know from all the trials I have
10 had.

11 All right. Lack of insurance. Granted. You
12 can't refer to insurance.

13 Defendants' attorneys and amounts spent defending
14 this case. No reference to that. Granted.

15 Other cases involving counsel mentioning any other
16 cases where defendants or counsel may have been
17 involved. That's granted, but certainly material or in
18 the form of sworn statements, depositions, testimony
19 used in other cases when it is relevant can be brought
20 forward as evidence, and it will be referred to as a
21 sworn statement or a statement under oath and not be
22 referred to as testimony in another case.

23 MR. McLEOD: Thank you, your Honor.

24 I think this actually came up a good bit in the
25 Glenn trial where I feel like sometimes we're not

1 allowed to publish pleadings or talk about Mr. --
2 apparently Mr. Sizemore's previous asbestosis case, but
3 then when it comes to cross-examination of our
4 witnesses, they talk a lot about previous cases that we
5 have.

6 THE COURT: No, they -- I never allow them to do
7 that. They cannot refer to any sworn statements as
8 testimony in another case. And if they start doing
9 that, you need to get up and object, because that's
10 against my instructions. All you can do is impeach a
11 witness by saying: You gave a sworn statement to this
12 effect and, you know, use that sworn statement to
13 impeach. That can be done, but I will protect you on
14 that.

15 MR. McLEOD: Thank you, your Honor.

16 THE COURT: Lack of corporate representative
17 mentioning the presence or absence. That's granted.
18 We don't allow that.

19 Illnesses, mentioning the alleged exposure of
20 family members. This is not a bystander case, so
21 that's granted.

22 Probable testimony, mentioning the probable
23 testimony of a witness who is absent or unavailable.
24 If they're unavailable and they're not going to
25 testify, you can't mention their testimony.

1 MR. BRANHAM: Judge, if they have got an expert
2 who they tendered in the case and we deposed that
3 person and they don't call that expert, right, I would
4 intend to talk about what that expert -- here is what
5 that expert -- I might say in opening: Here is what
6 he's going to come in here any say, and then they
7 decide not to call them and I comment on the fact that
8 they didn't call the expert in closing.

9 THE COURT: They're going to do that at their
10 risk. They're going to tell you who they are going to
11 call, and if you refer to it in your opening statement
12 and then they don't call that person, you will be
13 permitted to cover yourself in that regard. I have
14 seen y'all talk about that's going to happen several
15 times, but it never has actually happened.

16 Personal beliefs of counsel. Granted. Can't do
17 that.

18 Improper or prejudicial comparisons, like the Erin
19 Brockovich, cigarettes, all that. Granted. Can't do
20 that.

21 Concert of action among defendants. I never have
22 understood that completely. But, normally, unless
23 there is some direct evidence of a conspiracy or
24 concert of action, I would grant that. Right now it's
25 y'all and y'all alone, so there would be nobody else

1 you would be talking about.

2 Inflammatory photographs or videotapes. They are
3 always going to be presented to counsel before they are
4 shown to the jury, so that's granted.

5 13, publishing evidence prior to the admission.
6 We don't do that. That's granted.

7 Religious or political beliefs. That's 14.
8 Granted. Don't refer to that.

9 15, any reference to wealth or power or corporate
10 size. That's granted. I always instruct the jury
11 everyone is on equal footing.

12 16, any references to statements or arguments that
13 the jury should send a message. We don't allow that.

14 MR. BRANHAM: Judge, go back one second on the
15 corporate size issue.

16 THE COURT: Yes, sir.

17 MR. BRANHAM: One of the things where that can get
18 touched on is if they had worldwide offices and they're
19 saying, I didn't know anything about the hazards of
20 asbestos.

21 THE COURT: I think that's fair.

22 MR. BRANHAM: I just didn't want to run afoul of
23 that.

24 THE COURT: You have at least one exhibit where
25 that's probably going to be discussed, and that goes to

1 knowledge because of all the places they were. But
2 that's not a reference that they should be -- that poor
3 little plaintiffs should be compared to the relative
4 size of the corporation.

5 All right. That's all the motions in the omnibus
6 motions.

7 Number 2 is causation requirements in South
8 Carolina. Exclude any testimony that there's no safe
9 level of exposure, each and every exposure. I deny
10 that routinely over your objection.

11 MR. McLEOD: Over our objection. We believe any
12 testimony, including as part of a total cumulative
13 dose, no matter how small that may be, is in direct
14 conflict with the Lorman standard that the plaintiffs
15 are allowed an exception to prove causation and over
16 our objection.

17 THE COURT: It's a battle of the experts, and
18 there is a good, strong body of experts that say that
19 it's a cumulative dose situation, that each and every
20 dose contributes to the overall situation. So I
21 understand your experts say no to that and theirs say
22 yes.

23 MR. McLEOD: Sure. And our argument is we
24 disagree with their experts, but it's a little
25 different than that.

1 THE COURT: Well, you say that that violates
2 Lorman, and they say -- I disagree and have before. I
3 think frequency, regularity and proximity can be shown
4 by experts who talk about this cumulative effect of the
5 doses. But there will be plenty of competing evidence
6 about how that works. I don't think you will be
7 disadvantaged there.

8 Motion in limine number 3, exclude simulations,
9 videos and photographs from Longo's firm. I will deny
10 that. I have limited Longo in the Johnson & Johnson
11 case, and y'all were probably here for that and know
12 that Dr. Longo now has a cleaner way of making his
13 projections about respirability because he's now using
14 samples that are more clearly in a chain of custody.

15 It doesn't have much impact on your case, though,
16 because these industrial exposure cases are a little
17 bit different in that regard, but I would not exclude
18 MAS because it's unreliable or misleading, or confusion
19 or junk science. I have dealt with that many times
20 before. Dr. Longo will be permitted to testify.

21 What he does that y'all don't like in this case is
22 not the below-the-waist stuff. He does the gaskets and
23 he shows how all this stuff flies in the air when you
24 use a vibrating brush or something else or putty knife
25 or whatnot to knock off the gasketing that is glued to

1 the flanges, and I would allow him to do that.

2 MR. McLEOD: I was actually thinking this might be
3 a moot point since they're not bringing Charlie Aye,
4 your Honor.

5 THE COURT: That's generally who comes up and does
6 that, so I don't know.

7 MR. BRANHAM: We may very well play the Longo
8 videos.

9 MR. McLEOD: As long as we're able to
10 cross-examine.

11 THE COURT: You will be able to cross-examine him.

12 MR. McLEOD: Over our objection still.

13 THE COURT: The arguments in the motion, of
14 course, are a little bit pejorative when you talk about
15 Dr. Longo and his associates being hired guns who
16 designed these tests and all that kind of stuff, but
17 we'll move on.

18 Number 4, Crosby Valves' motion to preclude
19 improper hypotheticals.

20 Yes, sir.

21 MR. McLEOD: Your Honor, this has always come up
22 in asbestos litigation, and this is actually a really
23 important one, and I would beg the Court's indulgence
24 just very briefly.

25 THE COURT: Yes, sir.

1 MR. McLEOD: Let me explain to the Court what that
2 is about.

3 THE COURT: Why certainly.

4 MR. McLEOD: As you know, we have just about been
5 talking about it all day, the Lorman standard is what
6 we have here. And you have heard our motion for
7 summary judgment. You know, regardless of what
8 plaintiff says from the bench, it's our position that
9 the evidence in this case, as we sit here today
10 pretrial at summary judgment stage, that there is no
11 evidence that Mr. Sizemore was exposed to a Crosby
12 valve.

13 Now, I'm not rearguing our summary judgment
14 motion, but here is the thing. We deposed these
15 experts, and typically the plaintiff's experts at the
16 time of the deposition don't really have -- aren't
17 prepared to offer testimony to case-specific
18 defendants.

19 And the way that the plaintiffs get around letting
20 us sort of know what their testimony is, is they
21 reserve the right to ask hypotheticals at trial, which
22 is -- I'm not suggesting that hypotheticals are not
23 proper, but it has the effect of preventing us from
24 knowing -- we don't know what the hypotheticals are
25 going to be. So all we can do is go back to the rules

1 and the law and say, okay, well, they're not allowed to
2 give an expert or ask an expert to make assumptions
3 based on facts that are not existing in the record,
4 okay.

5 And this is different from a normal auto
6 accident-type case. We have different causation
7 standards here. The Lorman standard says mere presence
8 to static asbestos is not exposure. I think the Court
9 mentioned that today with the asbestos paneling. It's
10 just not enough. It doesn't meet the Lorman standard.

11 So the fact that Crosby valves might have been in
12 some of the facilities where Mr. Sizemore worked is not
13 enough. That is just static asbestos, and it doesn't
14 establish exposure.

15 And so that be as it may, we understand the Court
16 denied our motion for summary judgment. But what's
17 going to happen at trial is because they don't have
18 evidence to meet that Lorman standard, what they do is
19 ask hypotheticals and ask their expert to assume
20 situations that do meet the Lorman standard.

21 Well, assume Crosby valves are in this facility
22 and assume Mr. Sizemore worked with and around them.
23 There's no evidence of that. Assume Mr. Sizemore did
24 this on a frequent and regular basis. Well, there's no
25 evidence of that. And then they get their expert to

1 say, oh, yes, that would have been enough to cause
2 Mr. Sizemore's disease.

3 And this motion is based on the fact that not only
4 is that not permitted by the rules because there's no
5 evidence, underlying evidence for those hypotheticals,
6 but it means that the expert's causation opinions are
7 inherently unreliable because they're not based on
8 facts and evidence. And this is how they attempt to
9 get around the Lorman standard.

10 So just for an example, if there was one record in
11 the case that one Crosby valve is right here, it's not
12 enough to meet the Lorman standard on a typical case.
13 But if they come in and generate facts through a
14 hypothetical that satisfies that Lorman standard and
15 allows their expert to testify, and to the jury it
16 sounds -- it's so prejudicial because here is an expert
17 doctor saying, oh, well, if he says it, it must be
18 true.

19 So there is an extreme possibility for prejudice
20 in this situation. And this motion is tailored --
21 we're not saying that they can't ask hypothetical
22 questions, but they must be based on the evidence
23 that's presented at trial.

24 And as we sit here today, there's no evidence that
25 Mr. Sizemore ever was exposed to any -- a Crosby valve,

1 much less an asbestos-containing one, because, quite
2 frankly, all these valves were. So, quite frankly, the
3 evidence is nonexistent.

4 I'm sure Mr. Branham is going to stand up and try
5 and connect some dots, and he talked about release
6 valves and those could have been Crosby's, but that's
7 not what the Lorman standard says. It says: Exposure
8 to a specific product on a regular basis in proximity
9 to where the defendant worked.

10 We don't have the evidence in this case of that,
11 and they should not be able to ask hypotheticals of
12 their experts. And if they do, the testimony should be
13 stricken if it's not based on the evidence.

14 MR. BRANHAM: Your Honor, if the motion is to
15 preclude me from asking a hypothetical that is not
16 based in the facts, I agree. We clearly disagree what
17 the facts are.

18 THE COURT: Yes, and that's just it. The biggest
19 thing that undergirds the arguments that Mr. McLeod is
20 making is the assumption that nothing but direct
21 evidence is real evidence of Crosby valves being in
22 these various plants.

23 Now, I've got to tell you, I have tried a bunch of
24 these asbestos cases now involving a discrete group of
25 locations in the State of South Carolina where miles

1 upon miles upon miles of piping and tubing and other
2 kinds of conduits for transmitting very high
3 temperature materials are contained. Crosby valves are
4 generally shown to be at these places by use of sales
5 records of Crosby or purchase order records of the
6 corporations. They are rarely shown by having direct
7 testimony from these folks who work there. They will
8 tell you a lot about valves and what they look like and
9 so forth, but only intermittently do they, in a 47-year
10 career like this man had, get down to the granular
11 ability to identify a specific piece of equipment at a
12 specific time. But those gaps are filled in, as is
13 permitted, by circumstantial evidence by connecting the
14 dots, that is, by showing purchase records, purchase
15 orders, sales records, the service personnel, the work
16 service personnel at particular sites and so forth.

17 So I certainly am not going to grant such a motion
18 as that. The hypotheticals are going to be proper if
19 they're based on properly admitted evidence, whether
20 that evidence is direct evidence or circumstantial
21 evidence. And the rules of South Carolina say that
22 direct evidence and circumstantial evidence are to be
23 given the very same weight. That's what the cases say,
24 whether they're in the criminal context or civil
25 context. So I would deny the motion.

1 MR. McLEOD: Real quick, your Honor. I think --
2 just real quick, real quick. I just want to make the
3 point that Lorman itself, including numerous, numerous,
4 numerous cases all over the country, granted summary
5 judgment based on the fact that they're only records of
6 the products existing in the facility, no testimony of
7 actual exposure to those products. That's one thing.
8 And I think that the Court is just a little bit -- I'm
9 not suggesting --

10 THE COURT: This is more than just the presence of
11 stuff. This is evidence of how these workers worked,
12 of how they deal with this equipment, of how they
13 service these records. I mean, we don't need to plow
14 this kind of ground. This is the battle of being able
15 to convince a jury, Mr. McLeod. But this is not
16 something where all you've got is a couple purchase
17 records. I used that as an example.

18 But before these cases are finished, there is a
19 good deal of evidence about how these men worked, what
20 kind of things they worked on, what kind of things they
21 were present next to when they were being worked on.
22 And in many cases, there are valves and pumps and the
23 kinds of things that your clients made and sold to the
24 facilities involved.

25 So I am not going to make some overall precluding

1 ruling. These cases are always a combination of direct
2 and circumstantial evidence coming from many different
3 directions. At the end, before the case is submitted
4 to the jury, and at the end of the plaintiff's case
5 before defendant even has to put up a case, I make
6 evaluations as to whether that evidence is sufficient
7 to move to the next stage.

8 This is very premature, in my view, to ask for
9 some overall conclusive thing because it's a
10 combination of a lot of different kinds of evidence.
11 And I now have the experience of having heard many of
12 these cases, and I think -- and I have at times granted
13 judgments at the end of the presentation of the
14 plaintiff's case because they did not connect a
15 particular defendant. I have let that defendant out.
16 I have granted a few motions for summary judgment where
17 there was absolutely no product identification.

18 But this case is not that case, in my view, so I
19 deny it.

20 MR. McLEOD: Thank you, your Honor.

21 THE COURT: All right. What else have we got? I
22 think that's the end of the defendants' motions in
23 limine.

24 MR. REID: Your Honor, I think everything left
25 falls under the umbrella of scheduling.

1 MR. BRANHAM: Do we need to talk about your
2 corporate rep or is the moving of the trial date going
3 to solve that problem?

4 THE COURT: Let's talk about the trial date.
5 That's the most practical thing we need to talk about.

6 MR. REID: Agreed.

7 THE COURT: Y'all sat very patiently through all
8 of Johnson & Johnson, and it looks at the present time
9 as if Johnson & Johnson will go.

10 I pushed the scheduling of Sizemore because the
11 thing had been removed, and I just didn't know whether
12 Judge Seymour, who is not in this country -- she is on
13 a trip overseas and will not be back until several
14 weeks from now. And I just didn't know whether she
15 would have the opportunity to rule on these removal
16 matters. But as it develops, she did have the
17 opportunity to rule, and ruled at the end of last week.

18 So all of these asbestos cases, four of them that
19 have been removed, have now been sent back to the
20 appropriate circuit courts.

21 So it looks to me as if J&J's case is going to try
22 beginning the 13th.

23 I can do one of two things. I really feel for
24 y'all because I jerked you around a bunch, and I did it
25 in the hopes that I could get things to the point where

1 we would settle, everybody would settle, and I have
2 achieved that to some extent because there are just two
3 of you left in the case at the moment, Crosby and Waste
4 Management.

5 I wish there was some way that y'all could come
6 together and compose the remaining cases. It would
7 have been easy if I had just granted the defendants'
8 motion for summary judgment, and it would be over on a
9 very thin scintilla of evidence. I have let the cases
10 go forward, as I normally do.

11 But y'all need to know something. And we can
12 either try to skate around a little bit, hope we get --
13 J&J gets to the brink and then settles, or we can just
14 go on now and put everybody out of their misery and
15 tell Mylinda Nettles to let the jury go and Sizemore is
16 off.

17 What should we do?

18 MS. McVEY: Our preference is to give it some time
19 to see what J&J does because Sizemore is ready to go.

20 THE COURT: It is. That's the sad part about it
21 is y'all have worked so hard and done such a good job
22 of getting everything to me, including your pretrial
23 briefs and voir dire questions and all that. So it is
24 absolutely ready to go.

25 MR. REID: Couple things, your Honor.

1 THE COURT: Yes, sir.

2 Give me some wisdom here, Mr. Reid. I don't know
3 what to do.

4 MR. REID: Your Honor, I'm afraid I'm short on
5 that this afternoon.

6 Overall, I think I'd like to have the Court put us
7 off.

8 THE COURT: That's a very legitimate request. I
9 understand that.

10 MR. REID: In part because --

11 THE COURT: You've got to line up experts and pay
12 them and make reservations and do all that kind of
13 thing.

14 MR. REID: And I have taken the time since the
15 Court informed us by e-mail on Friday about the
16 possibility of the movement of the trial to the 20th.
17 I'm going to have some expert difficulties that
18 effectively would have me putting on my case if there's
19 time available before the plaintiffs go.

20 THE COURT: And that's problematic too.

21 MR. REID: That leaves me without knowing what I'm
22 responding to when I go second. So we respectfully
23 request that. And I recognize the Court may want to
24 have some time go by, so I guess I would say this: My
25 preference would be to tell us this afternoon, but if

1 you could otherwise pick a date like noon Friday or
2 something like that. I don't know what the prospects
3 are for this talc case. I don't get involved with
4 those kind of cases. All I know about it is what I
5 heard this morning.

6 THE COURT: Well, you sat in the same -- you
7 listened to the same thing I listened to, and it didn't
8 sound to me like there was much settlement talk going
9 on.

10 MS. McVEY: I understand it puts all -- part of
11 the good news with having a block is it puts pressure
12 on both sides, right? And so we, of course, have to
13 pay our experts and line them up just like they do and
14 get ready to go.

15 The concern is that because Crosby's position
16 typically in resolving these cases is they don't
17 resolve, is that we're going to be right back here with
18 Crosby no matter what. And so we would prefer to keep
19 marching forward. And if we don't go and J&J goes,
20 then we don't go.

21 THE COURT: Here is the other thing that I have to
22 take into account as well. Hampton is a small county,
23 and I feel keenly the responsibility I have to Mylinda
24 Nettles, the clerk of court there. If the overwhelming
25 possibility is this case will not be tried, we owe it

1 to her to tell her that, and that's what's also driving
2 my concern.

3 MS. McVEY: I understand. I just -- I hate to be
4 this ready and not be given the opportunity to go, but
5 I understand.

6 MR. BRANHAM: Judge, I agree with everything that
7 she said. But, you know, there has been some recent
8 history around the country of J&J resolving these
9 cases.

10 Now, I sat there and listened to what you listened
11 to this morning too, and I agree with you. It sounds
12 like they're going to try that case. But given the
13 posture nationwide of these nationwide removals and how
14 much it's apparent that we're involved in a lot of
15 that, that that's putting a ton of stress on J&J
16 counsel because they can't get it removed fast enough.
17 They're still removing cases. They didn't remove them
18 all at once. So I have no idea or no inside
19 information about how that's playing out nationwide,
20 but I do think the J&J cases are in a little bit
21 different posture than they have been.

22 And, again, who knows. I heard the same thing you
23 did. But even a couple of days, I think, waiting to
24 see makes some sense.

25 THE COURT: Mr. Reid, anything further?

1 MR. REID: I can't tell you anything you don't
2 already know about the prospects of that case settling
3 or what difficulties Hampton County may have by keeping
4 it there, so I will not comment further on that.

5 To be honest, I think I'm duty bound, because of
6 our expert difficulties, of formally moving for a
7 postponement of the trial date.

8 THE COURT: I understand. I consider what you
9 said as a formal motion in that regard, and I'll regard
10 it as such.

11 MR. REID: Thank you.

12 THE COURT: But I'm going to continue the case not
13 just because of that, Mr. Reid, and that's not said
14 with disrespect.

15 MR. REID: Understood.

16 THE COURT: But that wouldn't alone drive me.
17 What's driving me is responsibility I feel to the clerk
18 in a small county and to our court administration to
19 have some certainty about what's going to go on.

20 So I will continue the Sizemore case.

21 MS. McVEY: Thank you, your Honor. We would ask,
22 because Hampton County is such a small county, it would
23 be beneficial, I think, to go ahead and get another
24 trial date from Hampton County when we can try this
25 case again.

1 THE COURT: I'll do some investigation on that,
2 and I think I can get probably a fairly quick date. Of
3 course, I have got to look at these other cases I have
4 blocked for the summertime, but let me explore that
5 with Mylinda and with court administration, and I'll
6 get back to you promptly on that with some suggested
7 dates, and then y'all can look at them and see how that
8 might dovetail or not dovetail with schedules for both
9 plaintiff's counsel and defense counsel. So I will be
10 mindful for the need for us to work on that together.

11 MS. MCVEY: Thank you, your Honor.

12 The last thing before Mr. Reid and Mr. McLeod go
13 is we do want to schedule --

14 THE COURT: Glenn.

15 (Off-the-record discussion about scheduling.)

16 THE COURT: Let me try for something. What would
17 the 10th or 11th be like for you all, Theile and Trey?

18 MS. McVEY: I can do -- the 10th is better, if
19 that suits, but I can make the 11th work.

20 THE COURT: I'm going to write June the 10th down
21 here. It's going to take doing a little bit of calling
22 around to see if that will work.

23 Trey.

24 MS. McVEY: He's okay.

25 MR. BRANHAM: Yes, your Honor.

1 THE COURT: I'm going to try for the 10th.
2 Tentatively put that in your calendars, and then I'll
3 get back to you, or Walker will, on that. Okay?

4 Get my brain back together again. I've got Glenn
5 stuff thrown all about every which way, so how about
6 each side try to get me up an agenda on what we need to
7 do on Glenn.

8 MS. McVEY: I will e-mail everybody.

9 THE COURT: So y'all kind of get together on that,
10 and we'll tentatively say the 10th is going to be it.

11 All right. We have got one more little round of
12 stuff here, which is Hopper.

13 THE COURT: What I have on Hopper is this is
14 plaintiff's motion for an expedited trial.

15 MS. McVEY: Yes, ma'am. Your Honor, I think this
16 is just a formality, but as you know, under our
17 statute, plaintiffs who have been diagnosed with
18 mesothelioma can move for an expedited trial basis.
19 The statute says 120 days from the date you grant the
20 motion. We're actually seeking to put Hopper on the
21 November block, the November 2019 block in this case.

22 Your Honor, the Hopper case is in pretty good
23 shape. He was diagnosed with mesothelioma in October
24 of 2018. We have answered discovery for the
25 defendants. We have given the releases to get any

1 other records they want. We have answered, of course,
2 their request to produce interrogatories. Mr. Hopper
3 has been deposed.

4 Your Honor, since he was diagnosed in October of
5 2018 asking for a November trial date, it's pushing
6 things for Mr. Hopper, and he would like to live to see
7 his trial date. So we would ask for an order granting
8 the motion for expedited trial and for you to schedule
9 it for the November block.

10 THE COURT: And his deposition is now complete?

11 MS. McVEY: Yes, ma'am.

12 THE COURT: All right. How many defendants are
13 there in the case?

14 MS. McVEY: There are a lot. I mean, there are a
15 lot.

16 MR. MERIWETHER: I have a list which I can read,
17 but you would get tired.

18 THE COURT: Robert, just roughly tell.

19 MR. MERIWETHER: At least 60.

20 MR. BRANHAM: Agreed.

21 MR. MERIWETHER: Rather a lot, really.

22 THE COURT: And the case is?

23 MS. McVEY: Richland County case.

24 THE COURT: A Richland County case.

25 Ms. McVey, anything else?

1 MS. McVEY: No, ma'am.

2 THE COURT: Ms. Techman is here.

3 Ms. Techman, who do you represent?

4 MS. TECHMAN: Good afternoon, your Honor. I have
5 quite a few of the 60-plus defendants. Jennifer
6 Techman.

7 We filed a response to the motion. I don't know
8 if the Court has it. It's filed on behalf of CVS
9 Corporation, Foster Wheeler Energy Corporation, General
10 Electric Company, Hobart Brothers, Ingersoll Rand,
11 Spirax-Sarco, the Lincoln Electric Company and Trane.
12 And now that I have read that, if your Honor would like
13 it, I can hand this copy up.

14 THE COURT: That would be great. Thank you so
15 much.

16 MS. TECHMAN: Appreciate you letting me use it.

17 Your Honor, you touched on my clients' concerns.
18 We certainly understand that Mr. Hopper would like to
19 have his day in court. The defendants simply are
20 concerned that we have sufficient time to fully
21 investigate the case.

22 There are a lot of parties in the matter. There
23 are multiple states at issue. There are, I believe,
24 more than 20 work sites at issue. Much of the
25 discovery is out of the control of the defendants. A

1 lot of the records are in the hands of third parties.
2 We don't have the ability to make those folks move any
3 faster than they move.

4 So our request is simply that the Court hold the
5 plaintiff's motion in abeyance because at this point my
6 clients contend that we can't make a good-faith finding
7 that the defendants would not be prejudiced by an
8 expedited trial.

9 THE COURT: How many of these job sites are in
10 South Carolina?

11 MR. BRANHAM: A lot.

12 THE COURT: A bunch?

13 MR. MERIWETHER: Your Honor, I can speak briefly
14 to that. I had taken a quick check in my materials.
15 By the way, I did a thumbnail count as well. I got 66.
16 I can be off by one.

17 For the work history which we could deduce for
18 Mr. Hopper from his complaint, his answers to
19 interrogatories and his deposition testimony, I've got
20 from 1963 to 1969 as a Navy seaman, and eventually he
21 was in the first group of the SEALs.

22 MS. McVEY: Your Honor, we disclaim the Navy
23 exposure, just as an aside.

24 MR. MERIWETHER: That will make life easier. I've
25 got '64 to 2004 during which he's in industrial job

1 sites in South Carolina, North Carolina, Georgia,
2 Alabama, Georgia and the Gulf of Mexico. I've got him
3 specifically in Lancaster, South Carolina at Clark
4 Controls, at the Westinghouse turbine plant up in
5 Charlotte, Duke Energy at various sites in South
6 Carolina and North Carolina. Got him at some of the
7 places with which you are familiar, such as Bowater and
8 the Dupont May plant right outside of Camden. But I've
9 also got him in some places that you probably haven't
10 run across before, but the Wansley power plant down in
11 Carrollton, Georgia, Mitsubishi up in Chesapeake,
12 Virginia. We've got the Eastover International Paper
13 Mill here in Columbia. We have got -- outside of
14 Columbia anyway. We have got Childersburg Alabama
15 Paper Mill down there.

16 MS. McVEY: Your Honor, we agree there is a lot of
17 work sites.

18 MR. MERIWETHER: I'm just saying we have got a
19 bunch, and it is a bunch of states. So I think it's
20 easier just to say South Carolina, Georgia, North
21 Carolina, Virginia, Alabama. I don't think we have got
22 Tennessee, but I could have missed it.

23 MS. McVEY: Your Honor, just in brief response to
24 that, this is not dissimilar to lots of cases you had
25 before you, of course. The Hill case, the Sizemore

1 case, they're complex cases, we agree. The statute in
2 South Carolina contemplates this and says, and you know
3 this, without a trial date, nothing happens. Right?

4 So they certainly could move for a continuance if
5 they feel like they aren't ready by the time the trial
6 date pops around, but he's a fellow with mesothelioma
7 who is very sick, and we want to get him a trial date.

8 THE COURT: What have we got scheduled past July?

9 MS. McVEY: So we're scheduled, I think, for July,
10 September. There is a November block that was open.
11 The only thing that's been moved to the November block
12 is the Sam Nicholas case.

13 MR. MERIWETHER: Which I think is a living meso
14 from our good friend --

15 MS. McVEY: It's my case, yes. It is currently
16 removed, like some of the other --

17 THE COURT: Is that the one Hendricks has?

18 MS. McVEY: No. No, ma'am. That's Covil. It has
19 still got Judge Seymour. I expect it will be remanded,
20 but it hasn't been yet.

21 THE COURT: So at the present time, really,
22 November has overflowed, but it has --

23 MS. McVEY: Sam Nicholas. We would ask Hopper to
24 go in that block.

25 MR. MERIWETHER: Would it go -- is Sam Nicholas

1 still living?

2 MS. McVEY: Yes.

3 THE COURT: So Hopper would go behind that?

4 MS. McVEY: Yes.

5 THE COURT: Okay. I will grant the motion.

6 MS. TWILLEY: Excuse me, your Honor. Allyson
7 Twilley on behalf of Shell Oil Company. I have one
8 other ground.

9 THE COURT: Come on up here. I don't want to jump
10 the gun if you have got something you want to say.

11 Come right on up and go ahead with your full name
12 for the court reporter.

13 MS. TWILLEY: Allyson Twilley for Shell Oil
14 Company.

15 Your Honor, we object to the motion to expedite
16 because the requirements of the Asbestos Act have not
17 been satisfied, specifically the requirement of the
18 report that has to be served.

19 The report that was served in this case, it
20 doesn't meet all the requirements of the act.

21 THE COURT: Well, specifically in what way is it
22 delinquent? I mean, are we talking about some
23 nitpicking things or some really important things?

24 MS. TWILLEY: Well, there are some specifications
25 that are in the statute as to what the report must

1 contain before a case can be put on an active trial
2 docket or expedited, for that matter.

3 So the report has to contain a diagnosis of
4 mesothelioma. And the one that the plaintiffs have
5 filed does state that. However, the report also has to
6 conclude to a reasonable degree of medical certainty
7 that exposure to asbestos was a proximate cause of the
8 diagnosis of mesothelioma.

9 And the report that was attached as Exhibit A to
10 the plaintiff's motion does not contain a conclusion,
11 anything to that effect.

12 THE COURT: This is a medical report that says he
13 has mesothelioma, but it doesn't say to a reasonable
14 degree of medical certainty? I'm sure we can repair
15 that rather quickly.

16 MS. TWILLEY: It doesn't address asbestos or
17 anything like that. It's just a pathology report. And
18 there's one other requirement that the report must
19 contain under Section 44-135.

20 THE COURT: It has a diagnosis of mesothelioma,
21 but it doesn't have this other little conclusion which
22 is?

23 MS. TWILLEY: There's two. There's one additional
24 one that the report must contain a conclusion that the
25 exposed person's medical findings were not more

1 probably the result of other causes revealed by the
2 exposed person's employment in that industry.

3 The report we have been provided does not contain
4 that, so that's the ground of our objection.

5 THE COURT: Very good. Well, mesothelioma, at
6 least in the industrial setting, is pretty much a
7 signature cancer, so I don't think that's going to be
8 disqualifying. I would overrule that objection.

9 Anything else?

10 MS. TWILLEY: We just wanted to put our objection
11 on the record that it's a requirement of the Act.

12 THE COURT: I understand that completely. That's
13 what Ms. Techman wants to do as well, and she's got a
14 bunch of clients and you have got an important client
15 and you need to be protected in that regard. I have no
16 dilemmas with that at all, and you are protected.

17 I will set it as the second case in the November
18 block.

19 MS. McVEY: Thank you, your Honor. I will submit
20 an order to you.

21 THE COURT: Exactly, detailing that.

22 Now, what else have we got?

23 MS. McVEY: Your Honor, there are a couple of -- I
24 think there's some that are easier than others. The
25 next one I think would be we have a motion to amend the

1 Hopper complaint to add two defendants.

2 THE COURT: Which defendants?

3 MS. McVEY: Armstrong, it's a steam trap company,
4 and Southern Insulation. And this just came out in
5 discovery. I circulated the amended complaint to all
6 the defendants. There were no true objections. Danny
7 White objected that he didn't have time to look at the
8 complaint, and Ms. Twilley just said he is withdrawing
9 that. And Kirk Morgan, who represents Ford Motor
10 Company, also couldn't consent.

11 MALE SPEAKER: We'll withdraw that objection.

12 THE COURT: Good. Bring that up here. I'll sign
13 it.

14 MS. McVEY: Thank you, your Honor.

15 Your Honor, just one final administrative motion.
16 Southern Insulation is a little bit like Covil and Star
17 Davis. They're defunct companies. The only assets
18 that we're even aware of are insurance proceeds. We'd
19 like to move to appoint a receiver, Protopappas.

20 THE COURT: I will do that.

21 MS. McVEY: Thank you, your Honor.

22 THE COURT: And you have got destructive testing?

23 MS. McVEY: Yes, ma'am. I'll let Mr. Branham
24 argue that.

25 MR. BRANHAM: Trey Branham for the plaintiffs.

1 Just to reorient you, we acquired from Lincoln
2 Electric Company in the Taylor case after argument a
3 couple of welding rods that they created. And we had
4 this discussion about Mr. Longo being involved in the
5 creation of the rods.

6 THE COURT: I know.

7 MR. BRANHAM: What the Court ruled was that if we
8 got the rods and a little bit of the flux, which is the
9 coating of the rods that has asbestos in it, is if we
10 wanted to conduct destructive testing on those rods, I
11 either needed the consent of Lincoln or I needed to
12 come back to talk to you. So here I am.

13 Here is the disagreement that we're having. What
14 Lincoln wants to know before they will even talk about
15 consenting is who am I sending it to, who is my
16 consulting expert, what is the test that my consulting
17 expert is going to do, and what are the results that my
18 consulting expert obtains.

19 Now, we have a consulting expert rule for a
20 reason, which is so that I can fully and fairly
21 investigate my claim. And ordering me to violate and
22 disclose the consulting expert privilege before I even
23 know what the results are is patently unfair, and there
24 is a reason for that, right? There is a reason they
25 don't want to tell me what Dr. Longo figured out or

1 what tests they have done, right, because it's
2 consulting expert. I understand that.

3 And so their arguments about why they should do
4 that fail. And let me explain to you.

5 Their first argument is that I'm forcing them into
6 a forced spoliation situation, right? I'm going to
7 destroy some of the rods. They have a limited number
8 of rods, therefore, they're going to be in a situation
9 of spoliation. Untrue. They have got court orders
10 ordering them to turn over the rods. You can't have
11 spoliation if the Court has ordered you to do
12 something.

13 Two, they made these rods. These aren't rods that
14 they made during the course of business when they were
15 making asbestos-containing rods. They made these after
16 that, after they had stopped doing that. If they run
17 out of rods and they think they need some more, they
18 know how to make them. I don't have that luxury. And
19 so there is no forced spoliation, your Honor.

20 The need to do this is really clear. Every expert
21 that has tested their rods comes back with results, and
22 then the way they attack these results are several
23 ways, which is the rods are old, they're contaminated,
24 we don't know where they were, must have been somebody
25 sprinkling asbestos on them, you didn't decontaminate

1 the rods. They go at the origin of the rods.

2 And it's funny because they're already doing this
3 here despite Dr. Longo's sworn testimony under oath
4 that he was there for the creation of the rods, which
5 their corporate representative was not, and that the
6 rods were created to be exactly the same kind of rods
7 that they made back in the day.

8 They lead in their response with: These are not
9 the same kind of rods. These are different, special,
10 designed specifically for a different kind of test. So
11 they're already going at these to attack them
12 apparently fearful of what they might reveal.

13 And so we ought to be able to do the destructive
14 testing. They haven't given me all the rods. They
15 gave me a few. They still have some left. They
16 presumably didn't give me all the flux, the coating on
17 the rods. They have some left. So it's not that I'm
18 going to be able to do a test that they can't do.

19 And this is the type of issue that goes straight
20 to the heart of the Hopper case and lots of other cases
21 like it. Their argument in these cases is that these
22 rods cannot under any circumstances release fibers.
23 That's their argument. Never. Not any.

24 So let's test their rods that they made and then
25 we can argue about whether that evidence comes in or

1 not, but I shouldn't have to disclose who I'm sending
2 it to or what I'm doing with it or anything else.
3 That's consulting expert privilege. I am entitled to
4 investigate my case without opening it to the world.
5 Just like they have done, creating these rods,
6 apparently having some of them tested, not disclosing
7 the results. And I haven't gone looking for that. Or
8 when I did, I stopped.

9 But if the Court's going to order me to disclose
10 the protocol that my consulting expert is going to use
11 and the results of whatever it is that he or she does,
12 then they should have to do the same thing. Any tests
13 that they have done, any information that they have
14 gleaned from testing their own rods, it's what's good
15 for the goose is good for the gander.

16 I don't think they should have to do that. But if
17 I'm going to have to do it, I'm in an unfair position,
18 they should have to do it too. So that's where we are,
19 and what I'd ask you to do is allow me to do the
20 testing.

21 THE COURT: All right. Ms. Techman.

22 MS. TECHMAN: Jennifer Techman for Lincoln
23 Electric and Hobart Brothers.

24 Your Honor, I'll start with Mr. Branham's last
25 point, what's good for the goose is good for the

1 gander.

2 Just to remind the Court, when we were last here
3 on plaintiff's motion to compel production of these
4 experimental welding rods that were made in the lab,
5 plaintiff contended that they were entitled to get all
6 the details notwithstanding my client's assertion of
7 consulting expert privilege. The Court has heard that
8 matter in detail, and I won't reargue those points
9 here.

10 But if we're going to apply the goose and gander
11 rule, I would say we're at the gander point of that
12 rule. You have already ruled that they were entitled
13 to the details with regard to Lincoln's consulting
14 expert, Dr. Longo. The gander portion of that means
15 that, as you ruled, we should get to know who is going
16 to test these experimental rods and what they're going
17 to do with them.

18 And, in fact, your Honor, I think that you have
19 already ruled on that. Page 67 of the transcript from
20 the proceeding on the motion to compel, you state: I
21 would ask that your Honor please require that in
22 order -- in your order that Lincoln get 72 hours'
23 notice of any destructive testing. And this was your
24 statement following: THE COURT: He doesn't have any
25 trouble with that. He is very much going to engage in

1 a protocol where you are notified before any testing is
2 done.

3 And I think that is the point where we are. They
4 wanted tests. They haven't done anything yet, but
5 they're here to discuss that. And you get the chance
6 to know who is going to do the testing and why they
7 are doing it in connection with that, so forth. I
8 think that is reasonable, and I will certainly do that.

9 Your Honor, I have attached the excerpt from the
10 proceedings to the response of Lincoln and Hobart to
11 plaintiff's motion for destructive testing. But I also
12 would like to make very clear so that the Court is not
13 later surprised by this, a very important point.

14 Lincoln, and there are only Lincoln rods at issue.
15 I believe the motion was styled as destructive testing
16 with regard to Lincoln and Hobart, but the only issue
17 is with regards to Lincoln.

18 Lincoln's position is testing of these rods is
19 irrelevant. These are experimental, lab-made rods that
20 are now nearly 30 years old. They are not
21 representative or materially the same as the rod used
22 by Mr. Taylor. We would be comparing apples and
23 oranges. So I want to make sure that the Court is
24 aware, Rule 401, threshold question, these are not
25 relevant on the issue of was Mr. Hopper exposed from

1 handling these experimental lab-made rods. He never
2 handled them, and they wouldn't be representative of
3 what he did handle.

4 THE COURT: What about Longo? Longo says they're
5 made to be exactly what he did handle.

6 MS. TECHMAN: I believe that Longo said that he
7 watched the rods be made to assure himself that they
8 complied with the formula for the litigation at the
9 time, which was what was commonly called fume testing.
10 The theory being as the rod is burned, does the fume
11 expose someone?

12 That is not the claim in Mr. Hopper's case. That
13 is not the claim in welding rod litigation in asbestos
14 anywhere in the country.

15 THE COURT: Well, why would you make them -- you
16 made them. Why would you make them if you weren't
17 going to make them to be just like the ones that you
18 used that Hopper would have used? What would have been
19 the point of making them something different from the
20 ones that are now being alleged to be defective?

21 MS. TECHMAN: I'm very glad you asked because
22 that's the heart of the matter. They were made for the
23 litigation as it was asserted three decades ago, and
24 that was fume litigation.

25 Mr. Hopper, I believe plaintiff's will claim,

1 could have had potential exposure from handling the
2 rods, not from handling it and breathing the fumes.
3 That's not the claim in this case. Instead they may
4 say rods are on the floor and got stepped on --

5 THE COURT: That doesn't make any sense to me. I
6 don't care what kind of exposure. I'm asking the more
7 fundamental question: Why would you have made the rods
8 to be any different from the rods that were in
9 existence at the time? What would have been the point
10 of that?

11 MS. TECHMAN: The rods were made to address the
12 claim in fume litigation, your Honor. Which is not the
13 claim at issue in this lit -- I simply -- I understand
14 your frustration and you may be unsatisfied with my
15 explanation. I want the Court not to be surprised
16 later if there is some testing of these experimental
17 rods, I don't want the Court to feel like we were not
18 candid.

19 I want you to know that it will be Lincoln's
20 position that the results of any of that testing is
21 wholly irrelevant and also unnecessary, your Honor,
22 because plaintiffs have testing from someone named
23 Laurie Todd. They have testing done on actual
24 production rods by a gentleman named Schuster.

25 And also you may recall the last time we were

1 here, we talked about how this is not the first request
2 for the experimental rods. This is, to my knowledge,
3 at least the third request. At least two times prior
4 to this courts determined that the rods were protected
5 by privilege, that there were exceptional
6 circumstances -- let me make my point, please. I'll
7 get to it.

8 THE COURT: Yes, ma'am.

9 MS. TECHMAN: Twice five rods were given to
10 different plaintiffs' firms in asbestos litigation. We
11 never saw the material again. No test was done, or
12 that test was and it was fantastic for the welding
13 defendant.

14 I don't know if Mr. Branham has spoken with the
15 other members of the plaintiffs' asbestos bar who have
16 already been through this very exercise.

17 With regard to spoliation, Lincoln's concern is
18 that if we keep giving five, five, five, eventually, of
19 course, there will be none and we will be -- we will
20 have a motion to compel, and our response will be: We
21 have nothing to give you.

22 THE COURT: Mr. Branham makes the contention that
23 you know exactly how these things are made, and if you
24 need to make some more, you can do that.

25 MS. TECHMAN: Does that leapfrog over the issue of

1 why we need to manufacture rods --

2 THE COURT: Don't ask me a question. Answer that
3 question first. Mr. Branham contends that you can --
4 that your company, if they run out of these -- you call
5 them experimental, Longo calls them very same as the
6 ones that Hopper handled -- but whatever it is,
7 Mr. Branham asserts that y'all have exact information
8 about the experimental rods quote/unquote and how they
9 are made and that you can duplicate them. Is that so?

10 MS. TECHMAN: I think I understand the Court's
11 question: Could Lincoln remanufacture a production
12 rod, not an experimental rod?

13 THE COURT: No. My question is we have got some
14 rods that they say are the same. You call them
15 experimental. They call them the same as the
16 production rods. Presumably you have some information
17 within Lincoln as to how the production rods were made,
18 and if there's some difference, how these rods were
19 made and have the ability to remake these. That's what
20 I'm asking. Can't you do that?

21 MS. TECHMAN: I don't know, Judge. But I don't
22 even know if we even have to reach that question
23 respectfully --

24 THE COURT: I'm asking because I need to know
25 because of the other arguments you're making. So I'm

1 asking you one more time: Can't you remake these rods?

2 MS. TECHMAN: Could Lincoln remanufacture
3 production rods of the type that Mr. Hopper used?

4 THE COURT: Ms. Techman, don't rephrase my
5 question one more time. I am asking. They are in
6 existence now. Some rods you still have and some you
7 have turned over to the plaintiff pursuant to my order.

8 MS. TECHMAN: Correct.

9 THE COURT: And if you run out of the ones you
10 have turned over to plaintiff, you have got some more
11 left, but if you run out of them, can you remake some
12 that are just like these?

13 MS. TECHMAN: I don't know, Judge, is the most
14 candid answer I could give the Court. I don't know.
15 Could they follow the same formula? It seems logical
16 to me. But would they remanufacture the experimental
17 rod that was representative for testing in the fume
18 litigation, I don't know why they would because that's
19 not the nature of the claim anymore because the science
20 has shown that that's not a viable --

21 THE COURT: It doesn't make any sense to me that
22 you would have made it any different from the one that
23 Hopper handled. This idea of it's a fume claim and
24 therefore we made it different because of that, that
25 doesn't make any sense to me.

1 What makes sense to me is that you would remake a
2 rod that was like the one he handled so it could be
3 tested. And it wouldn't matter what kind of claim he
4 was making. The beginning point of any kind of testing
5 would be to remake one that's like the one he handled,
6 whatever his claim is about, what the thing did or did
7 not do.

8 MS. TECHMAN: I think my assumption is that
9 30 years ago, if the company was trying to make a
10 mock-up of a product to assess something, they would
11 have built that mock-up based on the nature of the
12 claim at the time. And we have come 30 years from
13 that. The claim is different.

14 THE COURT: I think I understand your argument.

15 Now, have you turned over to them any testing you
16 have done including the name of the tester, the
17 protocol engaged in and the result of the testing?

18 MS. TECHMAN: I believe plaintiffs' bar does have
19 testing by Laurie Todd and by Schuster.

20 Correct?

21 MR. BRANHAM: Judge, I think we're confused. What
22 I'm talking about is who they hired to do their
23 internal testing for rods that they have not produced.
24 There are plaintiffs' experts that have tested some
25 rods that were found elsewhere. We talked about that.

1 But my point in what she said, which is incorrect,
2 is that I asked and was given their consulting expert
3 information. That's not correct. All I got -- the
4 initial motion said I want it all. Right? And then I
5 filed an amended motion to say all I want are the rods
6 and the flux. And, actually, the asbestos sample which
7 they say they're now out of. But I got two of the
8 three based on your order. But that's all I've gotten.
9 I have gotten the rods and the flux. I have gotten no
10 internal information of what Lincoln's test results
11 from its consulting experts are, which is exactly what
12 she's asking of me.

13 THE COURT: All right.

14 Have you done internal testing by internal
15 consulting expert on these rods that are like the ones
16 that you gave Mr. Branham?

17 MS. TECHMAN: I don't know the answer to that,
18 your Honor. My point was if plaintiffs --

19 THE COURT: Let's get this piece of it first.

20 He wants sauce for the goose, sauce for the
21 gander. If you want his consulting expert, the
22 protocol to be used and the results, he wants that same
23 information of your internal experts who have already
24 tested this material. And I can't believe that hadn't
25 been so. Surely to goodness you have internal experts

1 who have tested and used a certain protocol and gotten
2 results. And that's what we talked about last time.
3 That's what you quoted out, the remarks I made at our
4 last hearing.

5 What I want to have done is you give them your
6 internal experts, their protocol and what the results
7 are, and I will require him to give you his expert, his
8 consulting expert, the protocol and the results, but I
9 want those two things to go in parallel.

10 MS. TECHMAN: Your Honor, he's already discovered
11 my expert. I asked you to clear the courtroom. I
12 asked you to take us in camera. You said no, that
13 horse is out of the barn. This is Dr. Bill Longo.
14 They know him. I think they have called him. I think
15 they have those answers. I'm simply asking you to do
16 what you said when we were last here on plaintiff's
17 motion, which is that you would give Lincoln assurances
18 with regard to these finite resources.

19 THE COURT: I've heard this argument once already.
20 I'm trying to get a real specific piece of information,
21 and I don't think I'm being played with directly.

22 I want to know, A, have you got someone who
23 internally has tested this material, had a protocol and
24 has results? And you're saying that person is Bill
25 Longo?

1 MS. TECHMAN: I'm saying --

2 THE COURT: No, no. Please answer my question.

3 MS. TECHMAN: Your Honor, I am.

4 THE COURT: You're saying that this person is Bill
5 Longo?

6 MS. TECHMAN: Your Honor, my answer is that I
7 don't know if testing regarding handling was done on
8 these experimental rods. I doubt it personally.
9 Because this product was made for fume litigation, not
10 handling.

11 What I can tell the Court is that testing by
12 Lincoln of production rods, the type of rod Mr. Hopper
13 could have potentially actually used, has been done and
14 if the plaintiffs --

15 THE COURT: I'm not talking about that. I am
16 talking about whether testing has been done on these
17 rods that were made specially and that he's now got a
18 piece of along with the flux. Has that material been
19 tested internally?

20 MS. TECHMAN: Don't know, your Honor.

21 THE COURT: Let me tell you what I'm going to do
22 then. I'm going to order that Lincoln provide --

23 MS. TECHMAN: Pardon me --

24 THE COURT: -- the name of the person who tested
25 the same rod that you have given to Mr. Branham and its

1 flux and whatever else goes along with it, the protocol
2 that was used and the result that is obtained. I'm
3 going to direct the company do that within ten days.

4 I am going to direct that when that is received,
5 that Mr. Branham will have 30 days to identify for you
6 the expert that's going to test this very same stuff,
7 the protocol to be used, and when he gets a result,
8 he's going to give that to you.

9 But what's going to happen first, don't dodge me
10 around by talking about production rods or 30 years ago
11 or fume or anything like this. You have got a certain
12 kind of rod that I made y'all produce by order to
13 Mr. Branham. And you also produced the flux that went
14 with it. I am going to require the company to give to
15 Mr. Branham the name of whoever tested it, the
16 protocols used and results obtained within ten days.

17 MS. TECHMAN: May I ask a question?

18 THE COURT: Yes, ma'am.

19 MS. TECHMAN: Twice, to my information and belief,
20 the sample of five experimental rods were delivered to
21 different plaintiffs' firms.

22 THE COURT: Good. If they were delivered to
23 several different people to test, I want to know the
24 name of each person to whom they were delivered, the
25 protocol used and the results obtained.

1 MS. TECHMAN: Your Honor, we have never at Lincoln
2 been told whether any testing was done or who did it or
3 how they did it or what the results were.

4 Now, one of those folks was a gentleman named
5 Bobby Hatten. And Mr. Branham and I talked briefly
6 after the motion to compel hearing, and I thought that
7 Mr. Branham was potentially going to speak to
8 Mr. Hatten. I don't know. I'll certainly let him
9 speak to that, but he may have better information than
10 me about the testing that has been done on these rods
11 because it was twice given to two different plaintiffs'
12 firms for testing.

13 THE COURT: I'm not talking about given to a
14 plaintiff's firm. I am talking about internal testing
15 by Lincoln. There's no way that they would have given
16 samples to a plaintiff's firm and not done some testing
17 internally. I do not conceive that any company would
18 have done it that way. They would have done some
19 baseline testing before they ever turned over anything
20 to a plaintiff. That's what I want. I want to know
21 who tested it internally, I want to know what protocol
22 they used, and I want to know what the results are, and
23 I want those to be given to Mr. Branham.

24 MS. TECHMAN: So I'm clear, with regard to the
25 Court's ruling, you are requiring Lincoln to

1 potentially divulge its consulting expert privilege?

2 THE COURT: That's correct, because you are asking
3 that the plaintiff do the same, and I'm going to put
4 you on the same footing. The reason that I'm making
5 this order is because you have been required to give
6 the samples, but now you want to know before he tests
7 it who his expert is, what the protocol is that's going
8 to be used, and you want the results. And I'm going to
9 allow that because I'm going to precede it by making
10 you give up, exactly right, the internal testing that's
11 been done -- not what you sent to another plaintiff --
12 the internal testing that Lincoln did, who they used,
13 what protocol and what result. Yes, I'm ordering that
14 that be done within ten days.

15 MS. TECHMAN: And this is without regard to your
16 ruling on plaintiff's motion to compel, despite the
17 fact that you have said that plaintiffs need to let us
18 know --

19 THE COURT: I'm going to adopt the very procedure
20 I just outlined to you, which is I'm going to require
21 you to give up that information, and then I'm going to
22 allow you to receive the name of the expert, the
23 protocol to be used, and the results obtained. So
24 that's how it's going to work.

25 Do you understand?

1 MS. TECHMAN: Thank you.

2 MR. BRANHAM: Just one point of clarification.
3 Should we be able to reach an agreement with Lincoln
4 about whether or not we need to exchange that
5 information, are we free to work that out?

6 THE COURT: Absolutely. Always. But in the
7 absence of any agreement, this is how it's going to be
8 done. True sauce for goose, true sauce for gander. So
9 if you will get me an order to that effect, that's what
10 we'll do.

11 What else?

12 MR. BRANHAM: Judge, if we need to, Georgia Power
13 is a defendant in the Hopper case. They have a
14 personal jurisdiction motion they have filed. We have
15 taken some discovery. We have some dispute about the
16 discovery, and I think that counsel for Georgia Power
17 wants to be assured that if he gets this heard at a
18 later point in time, he's not going to be prejudiced by
19 not having it heard immediately.

20 THE COURT: No worries. I'm not going to use the
21 old saw, oh, you waited so long, the time just went by
22 and so forth and so on.

23 MR. HAZELTON: Andy Hazelton appearing for Georgia
24 Power Corporation. For the record, my official
25 position is I want to go forward with my motion today.

1 That's my official official position.

2 THE COURT: Understood. And your official
3 official position will be granted if that's what you
4 want to do. Mr. Branham is prepared. But I also will
5 assure you that no prejudice will obtain by having it
6 heard at some later date.

7 MR. HAZELTON: Thank you, your Honor.

8 THE COURT: What else?

9 MS. McVEY: I think that's it.

10 THE COURT: Holy moly.

11 MS. McVEY: Your Honor, the only other thing is we
12 have filed a motion to expedite the Rollins case.

13 THE COURT: I got it.

14 MS. McVEY: So it's the same type of case as
15 Hopper. The Rollins case was filed immediately after
16 Chief Justice Beatty's order saying asbestos dockets
17 would go into general --

18 MR. MERIWETHER: Circulation.

19 MS. McVEY: -- general circulation, for lack of a
20 better word. I am concerned. I'd like to get that
21 motion heard. I believe you can hear it as a circuit
22 court judge, but I don't want to -- I wanted to raise
23 that, that Mr. Early told me that they were concerned
24 about hearing that today.

25 THE COURT: Well --

1 MR. MERIWETHER: Your Honor, I don't know if Will
2 is here, but I have -- Robert Meriwether. I have some
3 clients in the Rollins case. It's my position that
4 Rollins, I don't think you had appearances by most of
5 the defendants in Rollins, and so I don't think there's
6 any way to effectively have given notice to the
7 defendants.

8 THE COURT: Well, I agree with that. And,
9 furthermore, I don't think y'all got any -- I mean, who
10 knows what the next order will be about all this, but I
11 don't think there's any real need for Mr. Early to be
12 concerned.

13 MS. McVEY: I agree. And so since we're not going
14 to hear it today, I'm wondering if we can hear it on
15 June 10th when we do the Fisher.

16 THE COURT: Yeah. And I will just say in a little
17 more general fashion since there are still some who
18 have suffered through this whole day because they have
19 various interests in asbestos litigation, if there are
20 other things that are in that same posture that you
21 want to at least get some resolution, if possible, then
22 we'll try to turn June 10th, if I can secure everything
23 forward, into a day when we hear other asbestos things
24 that are ripe to be heard.

25 MALE SPEAKER: That sounds great.

1 THE COURT: Does that make sense?

2 MALE SPEAKER: Yes, your Honor.

3 THE COURT: Why don't we just do it that way. In
4 the meantime, what we're trying to do is get together
5 and get our steering committee to come forward with at
6 least some suggestions from both sides of the bar as to
7 how we want to go forward. And I don't know if that
8 will be complete by June 10th. Perhaps we'll have a
9 little bit better idea of how we're moving with some
10 kind of memo that I might tweak and get to the Chief on
11 kind of what's happening with this docket.

12 MS. McVEY: Thank you, your Honor.

13 MR. MERIWETHER: Thank you, your Honor.

14 I would simply say that for those of us who do
15 have folks in Rollins, we would also be interested to
16 see which judge gets assigned Rollins.

17 THE COURT: I don't think anything has been
18 decided about this whole thing anyway.

19 You would want to know that before you start
20 jumping on the road of starting to hear motions.

21 MR. MERIWETHER: Precisely. And if no other
22 reason, some of the judges before whom I have appeared
23 would take it amiss if someone else accelerated one of
24 their cases.

25 MS. McVEY: Except that it is a living

1 mesothelioma case, so we need to make sure.

2 THE COURT: We'll figure out something about that.

3 MS. McVEY: Thank you, your Honor.

4 THE COURT: Okay. Court is in recess.

5 (WHEREUPON, proceedings adjourned at 3:17 p.m.)

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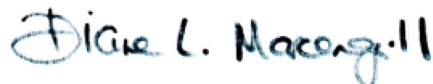
Certificate of Reporter

I, Diane L. Marcengill, Official Court Reporter
for the Tenth Judicial Circuit of the State of South
Carolina, do hereby certify that the foregoing is a
true, accurate, and complete transcript of record of a
portion of the proceedings had and evidence introduced
in the trial of the captioned case, relative to appeal,
in the Circuit Court for Richland and Hampton Counties,
South Carolina, on the 7th day of May 2019.

This transcript may contain quoted material. Such
material is reproduced as read by the speaker.

I do further certify that I am neither of kin, counsel,
nor interest to any party hereto.

May 8, 2019



Diane L. Marcengill, RPR, CRR, CRC
Circuit Court Reporter

Exhibit 85

EXHIBIT E16

FILED
Superior Court of California
County of Los Angeles

JUL 23 2018

Sherri R. Cal... .. Officer/Clerk
By Alfredo Morales deputy
ALFREDO MORALES

**SUPERIOR COURT OF CALIFORNIA
COUNTY OF LOS ANGELES**

Coordinated Proceeding
Special Title (Rule 3.550)

Case No.: JCCP 4674

LAOSD ASBESTOS CASES

CAROLYN WEIRICK, et al.,

Included Action Case No.: BC656425

Plaintiffs,

**RULINGS ON MOTIONS
IN LIMINE**

vs.

BRENNTAG NORTH AMERICA, INC.,
et al.,

Defendants.

This case is an included action within the LAOSD Asbestos Cases, Judicial
Council Coordination Proceeding (JCCP) No. 4674.

1 This Court's rulings on certain motions in limine are set forth on the attached
2 pages. Exhibit A are the rulings on the Plaintiff's Motions in Limine. Exhibit B are
3 the rulings on the defense motions in limine.

4
5 The rulings are presented in three columns. Only the third column
6 constitutes the Court's ruling. The first two columns are summaries prepared by
7 the Court's research attorney. These are left in for the convenience of the parties
8 and the trial judge, who might otherwise need to review all the pleadings to get an
9 understanding of the contentions. Where appropriate, this Court has reviewed the
10 original of the motion papers, including the evidence and testimony submitted.

11
12 The parties may not bring additional motions in limine during trial except
13 with leave of the trial judge assigned.

14
15 With respect to any motions in limine that rely upon Evidence Code § 352,
16 the Court has weighed the probative value (if any) of the evidence against the
17 prejudicial effect of its admission, as well as the potential for such evidence to be
18 cumulative, confuse the jury, or cause undue consumption of time.

19
20 The concept of admissibility evolves with trial. As the trial evolves, it may be
21 that evidence originally thought inadmissible becomes admissible in light of the
22 admission of other evidence not anticipated at the beginning of trial. Also, by
23 placing new facts in issue, a party can make previously inadmissible evidence
24 admissible to prevent unfairness to the other side. A motion in limine should be a
25 shield against the incitement of passion and prejudice, not a sword that is used to

1 lead the jury to inferences of factual conclusions that are not true or otherwise
2 improper.

3
4 Unless an in limine ruling is revised by the Court, compliance is expected,
5 and counsel should advise the Court outside the presence of the jury before allowing
6 a witness to go outside the bounds of a motion in limine. Counsel are ordered to
7 familiarize themselves with, and comply with, LASC Local Rule 3.57 (e).

8 DATED: July 23 2018
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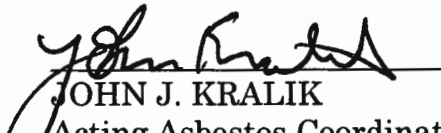
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13 JOHN J. KRALIK
14 Acting Asbestos Coordination
15 Judge of the Superior Court
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Exhibit B

Defense MILs Re: BC656425 (Weirick)

Date: 6-25-18
Time: 9:00 am

No.	What to Exclude	Arguments	Ruling
1	“[E]vidence or making any reference during trial to diseases allegedly caused by or associated to asbestos-free talc, including ovarian cancer and talcosis.” (Motion, p. 1.)	<p>Defendants contend:</p> <p>“Defendant Chanel, Inc. (“Chanel”), on behalf of itself and the remaining defendants, hereby moves this Court <i>in limine</i> for an order precluding Plaintiffs Carolyn Weirick and Elvira Graciela Escudero Lora (“Plaintiffs”) from introducing evidence or making any reference during trial to diseases allegedly caused by or associated to asbestos-free talc, including ovarian cancer and talcosis. This is an asbestos action. Plaintiffs allege that Plaintiff Carolyn Weirick (“Weirick”) was diagnosed with mesothelioma, a cancer in the lining of her lung, after having allegedly breathed asbestos fibers through her use and general presence around talcum powder products allegedly contaminated with asbestos. Plaintiffs’ experts concede that talc alone – absent contamination of asbestos – does not cause mesothelioma. Accordingly, any reference to diseases potentially related to the perineal use of uncontaminated talc (ovarian cancer) and mining and milling of talc (talcosis) would be wholly irrelevant, misleading, and would severely prejudice Defendants by inflaming the jury. Chanel requests an order precluding any evidence or reference to diseases not at issue, including ovarian cancer and talcosis. Similarly, Chanel requests an order precluding reference to the IARC classification for perineal talc use.” (Motion, p. 1.)</p>	<p>Granted:</p> <p>The Court finds that the motion should be granted. In light of the recent publicity and sizeable verdicts in the talc-only cases, the threat of prejudice is too great to allow Plaintiffs to present arguments and evidence regarding ovarian cancer, talcosis, and other non-asbestos injuries allegedly arising out of exposure to talc. The potential prejudice outweighs the probative value. (See, e.g., <i>Downing v. Barrett Mobile Home Transport</i> (1974) 38 Cal.App.3d 519 [injury from prior accident held irrelevant where plaintiff did not claim the subject incident caused the injury].)</p>

		<p>“Recently, lawsuits pertaining to ovarian cancer have been widely publicized and followed by national news. These lawsuits are often brought by individuals that believe that their perineal use of uncontaminated baby powder contributed to or caused such ovarian cancer. Specifically, the plaintiffs in these lawsuits believe that the talc in the baby powders contributed to their cancer. These lawsuits are unrelated to Chanel, and only relate to the use of baby powder products or other similar products intended to be used in the perineal region. By contrast, Chanel No. 5 was intended to be used as a fragrance, not for personal or feminine hygiene purposes. Critically, Plaintiffs do not allege that Weirick has been diagnosed with ovarian cancer from perineal use of talcum powders. In fact, Plaintiffs’ experts do not even claim that talc itself caused Weirick’s disease, but rather that trace levels of asbestos within the talc caused her mesothelioma. Indeed, Plaintiffs’ occupational medicine expert Dr. Jacqueline Moline concedes that talc absent asbestos contamination has never been proven to cause mesothelioma. (See Exhibit A to the Declaration of Nicole A. Harrison at 72:7-17).” (Id. at pp. 1-2.)</p> <p>“Similarly, talcosis has been studied epidemiologically as it relates to miners and millers of talc, that is, workers who have spent eight hours per day, five days per week in talc mines. In other words, there is a potential association between talcosis and prolonged exposure to talc. Here, Weirick’s alleged use and general presence around talc-containing products, including Chanel No. 5, is a mere and miniscule fraction of the work talc miners and millers perform around talc. Most importantly, Plaintiffs do not allege that Weirick has been diagnosed with talcosis. Like ovarian cancer, talcosis is a very different disease than mesothelioma, both in cause and source. Indeed, uncontaminated talc is believed to be a cause of ovarian cancer and talcosis. By contrast, Plaintiffs claim that asbestos</p>	
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		<p>within the talc in talcum powder products caused Weirick's mesothelioma, not the talc itself." (Id. at p. 2.)</p> <p>"This is not an ovarian cancer case. The disease process of ovarian cancer is markedly different than that of mesothelioma. They involve two different parts of the body, have different causes, and the epidemiology and scientific literature regarding the two diseases do not overlap. The same applies to talcosis. Accordingly, introducing evidence or even referencing ovarian cancer, talcosis, and other such diseases would be irrelevant to the claims made by Plaintiffs, and would result in a waste of the Court's time and resources. The only admissible evidence at trial is relevant evidence. Cal. Evid. Code § 350. Plaintiffs should therefore be precluded from introducing any evidence or referencing during trial any diseases not at issue in the case, including ovarian cancer and talcosis." (Id. at p. 4.)</p> <p>"[I]f Plaintiffs are allowed to reference diseases such as ovarian cancer and talcosis – two diseases that are thought to potentially be caused from exposure to talc – the jury may be misled to believe that talc causes mesothelioma, not asbestos. Moreover, lawsuits pertaining to ovarian cancer have been widely publicized and followed by the national news recently. These lawsuits are often brought by individuals that believe that their perineal use of baby powder contributed to or caused such ovarian cancer. Given the wide publicity such cases and their recent verdicts have received, as well as the personal nature of such lawsuits, it is very likely that reference to ovarian cancer will prejudice Defendants, including Chanel, by enflaming the jury. Specifically, such evidence could result in the jury believing that all products containing talc are dangerous, regardless of the evidence or expert testimony offered at trial. Accordingly, it is critical that Plaintiffs not be permitted to</p>	
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	<p>reference diseases not at issue in the case, including ovarian cancer and talcosis.” (Id. at pp. 4-5.)</p> <p>“For the same reasons stated above, any reference to or introduction of the IARC classification for perineal talc use should be precluded. Talc is not a carcinogen. The IARC monographs have differentiated the possible carcinogenicity of talc as it relates to perineal use, which is differentiated from talc not used for perineal purposes. Given that Plaintiffs’ allegations are that asbestos contamination in talcum products caused her disease and not the talc itself, any reference to the IARC classification for perineal talc use should be precluded, as it is not only irrelevant, but highly prejudicial, misleading, and serves to do nothing more than inflame and confuse the jury.” (Id. at p. 5.)</p> <p>Plaintiffs contend:</p> <p>“Defendants move to exclude reference to the association between talc and ovarian cancer. As with any other product liability claim, the relationship between talc and ovarian cancer is probative of the defendant’s knowledge of the hazards of talc; relevant to an analysis of the consumer expectations and risk/benefit tests for design defect; relevant to the analysis of allegations of a failure to warn; and material to establishing the element of malice in support of a prayer for punitive damages. In this case, such evidence is also particularly relevant to the issue of the presence of asbestos in Defendants’ talc, an issue which Defendants themselves vehemently dispute and upon which they even sought summary judgment. Defendants have actually attempted to discredit studies linking talc with ovarian cancer by pointing to the presence of asbestos in the talc as a confounding factor in those studies. Thus, the ovarian cancer discussion is relevant to the center-most issue in the case: whether the talc has asbestos in it.” (Opposition, p. 2.)</p>	
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		<p><u>“Consumer expectations” test:</u> “The fact that talc itself is a recognized carcinogen¹ for ovarian cancer is directly relevant to the “consumer expectations” test for Plaintiff’s strict liability design defect claims. A product is defective in design if it fails to perform as safely as the ordinary consumer would expect. (CACI 1203.) Evidence that talc puts its users at risk for <i>cancer</i> goes to the crux of the consumer expectations test; that Plaintiff developed another type of cancer due to the use of the product is inapposite. From the consumer or user’s perspective, cancer was never the expected result of cosmetic or baby powder use.” (Id. at pp. 2-3.)</p> <p><u>“Risk/benefit” test:</u> “CACI 1204 provides a product is defective if the benefits are outweighed by the risks, and/or the availability, cost, and feasibility of a safer alternative design rendered the harm from a product whose benefits outweigh its risks unnecessary and preventable under the circumstances. Defendants have repeatedly acknowledged that there is no actual health or medicinal benefit to the use of talcum powders. J&J has stated that the “Safety of cosmetic powders has been a concern, especially among health professionals. They have decided that powders provide no health benefit. Therefore, the potential for harm from respirables or accidental over exposure should be avoided. Mothers are now being advised not to use baby powder, especially talc baby powders.” Thus, in light of baby talc’s complete lack of “benefit,” any risk of association with ovarian cancer is unjustified. Further, Defendants admitted that the use of cornstarch instead of talc was an available and feasible alternative design, and that it is not aware of any risks associated with the substitution of cornstarch.” (Id. at p. 3.)</p> <p><u>Failure to warn:</u> “On the basis of ongoing ovarian cancer research, Defendants were aware that their product contained asbestos.</p>	
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		<p>Furthermore, J&J was aware that asbestos in talc was reaching the ovaries in research studies. [¶] This knowledge is relevant to Plaintiff's failure to warn claim insofar as J&J was aware of an early link between talc and cancer, but nevertheless failed to warn of it. J&J's conduct pertaining to early indications that talc was a cause of ovarian cancer are relevant to J&J's failure to exercise reasonable care and disregard for the health and safety of its customers and users." (Id. at pp. 3-4.)</p> <p>"The hazard posed by the product --- i.e., the risk of cancer created by the application or inhalation of talc --- is the hazard about which J&J was aware and should have warned. Whether the particular cancer which arises is the same from one talc user to the next is irrelevant for purposes of judging the defendant's knowledge of the hazard and its obligation to warn or find a safer design. So, whether Mrs. Weirick developed a cancer of the lining of her lungs versus of her ovaries doesn't alter the fact that the defendants were aware that talc could cause cancer and should have warned its consumers." (Id. at p. 4.)</p> <p>"Further, CACI 1203 and 1204 don't require that a Plaintiff prove a specific harm was contemplated by the defendant when it incorporated the hazardous design or failed to warn, just that it appreciated there was a risk of harm from the product or from whatever created the hazard. Indeed, CACI 1203 speaks only to the requirement that the product "didn't perform as safely" as a consumer would expect and the consumer "was harmed," and CACI 1204 requires only that plaintiff show the defendant made the product, that the plaintiff "was harmed," and that the product's design was a substantial factor in "causing harm." There is no additional requirement that the plaintiff show a particular harm, or the same harm, as any other victim of the product's defective design. A defective product may pose a danger in multiple different</p>	
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		<p>ways, and evidence that it caused different kinds of harm but from the same hazardous condition doesn't render such evidence irrelevant or inadmissible. For example, a defective airbag in a vehicle might cause facial lacerations, brain injury, even death. The fact that the outcomes might differ when a defective airbag deploys simply means the airbag posed a risk of harm to the driver about which the defendant should have warned[.]” (Id. at pp. 4-5.)</p> <p><u>Presence of asbestos during exposure period:</u> “The presence or absence of asbestos in talc implicated to induce ovarian cancers is relevant not only to J&J’s knowledge of the hazards of talc, but that talc is acknowledged to contain asbestos as a regular contaminant (“possible contamination of the talc with asbestos needed to be borne in mind”). [¶] Defendants acknowledge that the risk of ovarian cancer from talc was known well back into the 1960s. Interestingly, they blame the ovarian cancer association on the presence of asbestos during that era. Thus, this evidence is probative for two reasons: 1. Defendants admit the presence of asbestos in talc during the relevant time period, and 2. Despite an awareness of a risk during that time, they failed to warn or recall the product. Presence of asbestos in the ovaries from the use of talc is well known to the talc industry.” (Id. at p. 6.)</p>	
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No.	What to Exclude	Arguments	Ruling
15	<p>“[E]vidence of, or having [Plaintiffs’] experts rely upon, three sets of test results: Dr. Seymour Lewin’s 1972 preliminary report to the FDA; Dr. Lewin’s</p>	<p>Defendants contend:</p> <p>“Defendants Johnson & Johnson and Johnson & Johnson Consumer Inc. (hereinafter, “J&J Defendants”) seek an in limine order precluding Plaintiffs from presenting evidence of or testimony related to or relying on certain documents from the 1970s that purportedly identified asbestos contamination in some cosmetic talcum powders. Such documents are hearsay and may</p>	<p>Denied:</p> <p>The notice of motion identifies three test results. The first is Dr. Lewin’s 1972 preliminary report to the FDA. Defendants claim Plaintiffs will try to introduce secondary sources –</p>

<p>1973 final report to the FDA; and a 1976 article by Drs. Arthur Rohl and Arthur Langer, titled <i>Consumer Talcums and Powders: Mineral and Chemical Characterization</i>.” (Notice of Motion, p. 1.)</p>	<p>only be invoked to the extent that an expert may reasonably rely on them. The documents at issue are misleading and consequently entirely unreliable—some have been disavowed by the authors of the cited studies, some have been deemed unreliable by the U.S. Food and Drug Administration (“FDA”), and some have nothing whatsoever to do with the J&J Defendants’ products—Johnson’s Baby Powder and Shower to Shower—on their face. As a result, the J&J Defendants respectfully request exclusion of all reference to these documents at trial.” (Motion, p. 1.)</p> <p>“First, the J&J Defendants seek to exclude what are acknowledged as preliminary results of testing conducted by Dr. Seymour Lewin, including second-hand accounts purporting to set forth such results. These preliminary results and accounts, alleging that tremolite and chrysotile were found in several cosmetic talcum powders, including the J&J Defendants’ products, differ from Dr. Lewin’s final, official report to the FDA, which did not identify quantifiable levels of tremolite or chrysotile in the J&J Defendants’ products. The inaccuracy of some of these accounts was recognized by Dr. Lewin himself, who wrote a letter to the editor explaining that the Wall Street Journal, for example, had misreported his findings. Preliminary test results contradicted by the final reported results, let alone second-hand accounts of such repudiated test results, are not a reliable basis for an expert’s opinion.” (Id. at p. 1; see also id. at pp. 3-5.)</p> <p>“Second, the J&J Defendants seek to exclude tests performed in the 1970s by Dr. Arthur Rohl, Dr. Arthur Langer, and five co-authors (the “Rohl/Langer testing”). Drs. Rohl and Langer reported “asbestiform” particles in a subset of samples taken from several brands of cosmetic talc. But the article does not indicate whether any of these results purporting to show asbestos contamination</p>	<p>e.g., a <i>Wall Street Journal</i> article and Johnson & Johnson internal documents – that detail Dr. Lewin’s preliminary findings. Defendants contend the secondary sources should be excluded because (1) the <i>WSJ</i> article misreports the preliminary findings, and (2) the preliminary findings contradict Dr. Lewin’s final report. (See Motion, pp. 3-5.)</p> <p>The Court believes that the Wall Street Journal article should not be admitted for the truth of matter asserted based on the present state of the record. But it may be referenced by experts for its historical significance in the debate.</p> <p>Otherwise, the Court denies the motion under LASC 3.57(a) and <i>Kelly v. New West Fed. Sav.</i> (1996) 49 Cal. App. 4th 659. First, it is unclear which, if any, secondary sources Plaintiffs intend to introduce. The Court will not issue an advisory opinion as to a category of</p>
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	<p>involve the J&J Defendants' products." (Id. at p. 1; see also id. at pp. 5-7.)</p> <p>"Further, Drs. Rohl and Langer acknowledged that the testing methods they used were incapable of distinguishing asbestos from non-asbestiform amphiboles. As the Rohl/Langer testing does not, on its face, mention any of the J&J Defendants' products and does not distinguish between asbestos and non-asbestiform amphiboles, it is not the sort of reliable test result that Plaintiffs' experts are permitted to rely on to prove that the J&J Defendants' products contained asbestos. At least one other court has agreed and excluded such evidence for this reason." (Id. at pp. 1-2; see also id. at pp. 5-7.)</p> <p>Plaintiffs contend:</p> <p>"Defendants filed motion in limine to preclude Plaintiff and her experts from relying on what they call "unreliable" test results from the 1970s concerning its talc containing products and ore sources. Defendant claims that tests performed in the 1970s with a "positive" test result, i.e. showing that cosmetic talcum powders including Johnson & Johnson Baby Powder contained asbestos, are "unreliable." But there is no factual or legal support for Johnson & Johnson's arguments and its motion simply highlights the issues the jury must decide." (Opposition, p. 2.)</p> <p>"There is nothing "unreliable" about testing done in the 1970s that shows asbestos in cosmetic talcum powders, including Johnson & Johnson Baby Powder. To the contrary, the testing confirmed what was already well-known to the talc industry—namely, that talc was contaminated with asbestos. Testing done in the 1970s confirmed the presence of asbestos in cosmetic talc, including Johnson & Johnson Baby Powder. And even if Johnson & Johnson was correct</p>	<p>potential documents. The admission of the documents may depend on when they are offered and on the examination of the witness at issue. Second, the fact that Dr. Lewin's final report contains different findings than the preliminary report does not necessarily justify exclusion and both reports are part of the history of the product. Defendants' evidence fails to establish unreliability, and they fail to identify another basis justifying exclusion. Cross-examination and targeted objections at trial are the proper ways to resolve this issue.</p> <p>The second test result is Dr. Lewin's 1973 final report. Despite identifying it in the notice of motion, Defendants do not appear to actually seek exclusion. The moving brief does not argue that the final report is unreliable and inadmissible. This portion of the motion is moot.</p>
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		<p>that the amphiboles found in these cosmetic talc samples in the 1970s were “nonasbestiform” amphiboles, that fact would not make the studies unreliable or irrelevant. The underlying presence of nonasbestiform amphiboles in talc is significant for the presence of asbestos and, thus, relevant to this case.” (Id.; see also id. at pp. 4-6.)</p> <p>“The term asbestos is generally used as “[a] name applied to a group of naturally fibrous minerals.” (A.N. Rohl, Langer et al., Consumer Talcums and Powders: Mineral and Chemical Characteristics, J. OF TOX. AND ENV. H. (1976) p. 277, attached as Exhibit A to Langhoff Declaration.) “Asbestiform” is a synonym of asbestos. Mrs. Weirick and her experts thus contend that a substantial amount of the amphiboles present in Johnson & Johnson Baby Powder were, in fact, asbestiform (i.e., fibrous) and thus capable of causing disease.” (Id. at p. 2; see also id. at pp. 6-11.)</p> <p>“NIOSH’s current recommended exposure limit (“REL”) states that particles are countable, and thus regulated as asbestos, if they include “any fiber or fragment of a mineral longer than 5 microns with a minimum aspect ratio of 3:1” NIOSH further indicates that a “covered mineral” is any mineral having the crystal structure and elemental composition of one of the asbestos varieties...or one of their nonasbestiform analogs.” The evidence in this case will be that substantial numbers of particles meeting NIOSH’s definition of regulated asbestos (i.e., fibers more than 5 microns in length with a minimum aspect ratio of 3:1) were found in cosmetic talc, including Johnson & Johnson talcum powder products and source ores, in the 1970s.” (Id. at pp. 2-3; see also id. at pp. 14-15.)</p> <p>“The issues raised in this motion go to the weight of evidence, and thus fall squarely within the realm of cross-examination, and Johnson & Johnson’s ability to present its own evidence. These are</p>	<p>The third test result is the 1976 report by Dr. Rohl and Dr. Langer. Defendants contend the result should be excluded because (1) the report fails to identify the products that contained asbestos – i.e., it fails to identify a Johnson & Johnson product, and (2) the FDA found the result unreliable. (See Motion, p. 5.)</p> <p>The Court disagrees. Dr. Langer’s 1976 report detected asbestos in cosmetic talc. In 2015, he testified that he stands behind the report and has never retracted. (See Langhoff Decl., Ex. E, pp. 62-64.) The FDA’s contrary finding does not, itself, prove unreliability as a matter of law, but it can be weighed by the jury.</p> <p>As noted elsewhere, the early work on this issue is part of the historical record of notice and the development of the science to be considered by the present-day experts or other competent witnesses.</p>
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		<p>not issues of admissibility. Because they are liable for harm caused by asbestos-containing Johnson & Johnson talcum powder products, Defendants predictably take issue with the “positive” test results showing that cosmetic talc, and particularly Johnson & Johnson Baby Powder, contained asbestos. To the extent that Defendants take issue with the testing results, it may present its own evidence, as well as cross examine Plaintiff’s experts and challenge their theories. Defendants are well-protected by their ability to present their own evidence and experts, as well as cross-examine those retained by Plaintiff.” (Id. at p. 3; see also id. at pp. 16-18.)</p> <p>“Under Kelly v. New West Federal Savings (1996) 49 Cal.App.4th 659, a motion in limine is not a mechanism for Defendants to strike unfavorable evidence. Simply because evidence is damaging to Johnson & Johnson and/or Imerys, does not mean it is inadmissible. Johnson & Johnson is confusing “unduly prejudicial” with damaging. They are not the same. (People v. Coddington (2000) 23 Cal.4th 529 [“Prejudicial” is not synonymous with “damaging”]; Vorse v. Sarasy (1997) 53 Cal.App.4th 998, 1008-09 [evidence is not prejudicial merely because it undermines the opponent’s position].) Plaintiff therefore requests that Johnson & Johnson’s motion in limine on this issue be denied in its entirety.” (Id. at p. 3; see also id. at pp. 19-20.)</p> <p>Moreover, hearsay exceptions apply to the test results. (See id. at p. 18.)</p>	<p>The Court does not opine on the ultimate issue of whether any particular document will be admitted in evidence, or for what purpose, but an in limine motion is inappropriate.</p> <p>The Court shares Defendants’ concern about prejudice since Dr. Langer’s report fails to identify a Johnson & Johnson product. However, Plaintiffs identify some relevant, non-hearsay uses – e.g., notice of asbestos hazards in cosmetic talc and failure to warn. The Court does not assess at this point whether the document can be admitted for the truth of what it asserts. Defendants should make specific objections at trial so the trial judge can rule in context. The fact that no Johnson & Johnson product is referenced can be established through cross-examination. The motion is denied.</p>
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No.	What to Exclude	Arguments	Ruling
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16	<p>“[I]ntroducing, referencing, or having its experts rely upon the article authored by Ronald E. Gordon, Sean Fitzgerald, and James Millette, entitled <i>Asbestos in Commercial Cosmetic Talcum Powder as a Cause of Mesothelioma in Women</i> (the “Article”) or its contents.” (Notice of Motion, p. 1.)</p>	<p>Defendants contend:</p> <p>“Defendants seek an order prohibiting any party, witness or attorney from making any direct or indirect reference to the article entitled <i>Asbestos in Commercial Cosmetic Talcum Powder as a Cause of Mesothelioma in Women</i> (the “Article”), or relying on same. Defendants anticipate that Plaintiffs and/or their experts will attempt to rely on the Article as evidence that Defendants’ products, including Johnson’s Baby Powder, Shower to Shower, and Chanel No. 5, were contaminated with asbestos, but it is undisputed that the article concerns products not at issue in this trial.” (Motion, p. 1.)</p> <p>“The Article was written by Plaintiff’s purported expert Dr. Gordon and coauthors Mr. Sean Fitzgerald and Dr. James Millette, who also testify as expert witnesses for plaintiffs. (See August 9, 2016 Deposition of Sean Fitzgerald (“Fitzgerald Dep.”) 175:21-23, Exhibit P to the Declaration of Jennifer T. Stewart (“Stewart Decl.”).) The Article does not test, discuss, or mention any of Defendants’ talcum powder products at issue in this case. Instead, the Article involves a product manufactured by Colgate (Cashmere Bouquet) that is not at issue in this case. As a result, the Article is, first and foremost, entirely irrelevant. It is also inadmissible hearsay.”</p> <p>“In addition, the Article is not the proper basis for expert reliance. First, the Article lacks value as expert reliance material because the testing underlying the Article is fundamentally flawed and has been excluded in a number of jurisdiction due to lack of authentication. Second, the Article is essentially a compilation of reports and testimony prepared by plaintiffs’ experts in the context of litigation. Plaintiffs are not entitled to repackage expert reports and testimony from other cases and present it in entirely different litigation. Third,</p>	<p>Granted:</p> <p>Expert testimony regarding tested samples may be excluded based on a “chain of custody” claim. (See <i>People v. Catlin</i> (2001) 26 Cal.4th 81, 134.) “In a chain of custody claim, “[t]he burden on the party offering the evidence is to show to the satisfaction of the trial court that, taking all the circumstances into account including the ease or difficulty with which the particular evidence could have been altered, it is reasonably certain that there was no alteration.</p> <p>The requirement of reasonable certainty is not met when some vital link in the chain of possession is not accounted for, because then it is as likely as not that the evidence analyzed was not the evidence originally received. Left to such speculation the court must exclude the evidence. [Citations.] Conversely, when it is the barest speculation that there was tampering, it is proper to admit the evidence</p>
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	<p>the Article is akin to a case report, which is unreliable and irrelevant to the issue of causation and, if admitted directly or as a basis of expert opinion, would greatly prejudice Defendants, confuse the issues, and mislead the jurors.</p> <p>“Finally, Defendants would be extremely prejudiced if Plaintiffs were permitted to mislead the jurors into believing that the Article relates to products at issue in this case when it does not.”</p> <p>Plaintiffs contend:</p> <p>“Defendants’ motion assert that the article is “irrelevant because it does not test, discuss, or mention any of the talcum powder products at issue in this case – Johnson’s Baby Powder.” (Mot., p. 1). What Defendants fail to note is that the talc used in the 50 containers of Cashmere Bouquet analyzed in the article is the same talc used in Johnson’s Baby Powder. 1 The Italian talc used in Cashmere Bouquet was supplied by the same supplier of Italian talc to Johnson & Johnson: defendants Cyprus Amax Minerals and Imerys Talc America. This fact alone makes the article’s findings of asbestos in Cashmere Bouquet’s Italian talc directly relevant to the asbestos content of the same Italian talc used in Johnson’s Baby Powder and supplied by defendant Imerys.” (Opposition, p. 2.)</p> <p>“Further, the article provides relevant and crucial data regarding the releasability of asbestos from cosmetic body talcum powder products that contain trace amounts of asbestos by weight. (Exhibit A at paragraph 48.) Plaintiff’s experts rely on the article and the exposure data, and confirm that the data published by Gordon, et al. is consistent with historical publications and current testing of the Italian ore.2 Plaintiff’s expert materials analyst and microscopist, Steven Compton, PhD, analyzed talc ore from defendant Imerys’ Italian talc mines (the same talc at issue in the article) and</p>	<p>and let what doubt remains go to its weight.” [Citations.]” (Id.)</p> <p>The Court has examined the article and its reliability in a previous proceeding in these consolidated cases, Alfaro v. Imerys Talc, No. B277284. The Article chronicles testing of vintage Cashmere Bouquet samples by Plaintiffs’ expert, Dr. Gordon, and two other experts often employed by plaintiff firms – Mr. Fitzgerald and Dr. Millett. As such, it is more a part of the litigation science rather than the purely disinterested science. Mr. Fitzgerald and Dr. Millett are not designated in this case and their potential biases are not subject to cross-examination. Also, Cashmere Bouquet is not at issue in this case. In the Court’s view, allowing the Article, or allowing Plaintiffs’ experts to testify about the Article’s results cause prejudice.</p> <p>The motion is granted.</p>
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		<p>concluded that “the asbestos content of samples found to contain amphibole and chrysotile fibers range from approximately 1.7 to 660 million fibers per gram. After estimating the mass of the fibers, this corresponds to a quantity ranging from 0.00002% to 0.68% by weight.” Relying on the data published by Gordon, et al., Dr. Compton opined that “Fiber release studies of consumer talc products within this range documented elevated concentrations of airborne asbestos fibers during use of those products. It is expected that aerosolization of these samples or any powder consumer product containing these samples as a constituent ingredient would likewise result in elevated concentrations of airborne asbestos fibers.” This includes Johnson & Johnson Baby Powder. (Id. at p. 4.) Accordingly, the Gordon, et al. publication is relevant to the products at issue in this case and Mrs. Weirick’s exposure to asbestos therefrom.” (Id. at p. 3.)</p> <p>“Defendants’ motion is based on the false premise that the findings in the article are unreliable because it involves testing conducted while the authors were consulting in litigation. Defendants’ essentially argue, without any evidence or legal authority, that the Plaintiffs and/or their counsel paid for the article or that its authors have some sort of interest or financial stake in the litigation and that somehow Plaintiffs and/or their counsel interfered with the peer-review process. There is no factual support for this; indeed, one of the authors, Mr. Fitzgerald, has previously testified that no law firm or attorneys representing plaintiffs paid for or otherwise influenced the authoring or publication of the article. (Excerpts from Fitzgerald Depo. dated Nov. 6, 2014, at 14:4-8, 67:10-68:22, 72:7-13, 72:18-25, 74:15-25, 82:9-14, attached as Exhibit C.)”</p> <p>“Defendant cites to no legal authority to support this position either. It therefore requests this Court to announce, as a new rule of law, that where the author of an article is an expert in related</p>	
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		<p>litigation in which the article is to be offered at trial, it should be assumed that the author has a financial stake in the litigation generally and his article cannot be referenced. Again, Defendant cites no authority for this novel position, and requests an illogical inference from the circumstances, particularly in the context of specialized asbestos-related scholarship, which often necessarily intersects with expert witnesses used in asbestos litigation. Indeed, Defendants' own experts purport to be authors of scientific scholarship and they will almost certainly attempt to refer to such work as support for their opinions.⁴</p> <p>Defendants' criticisms of the article are not a proper basis for an evidentiary challenge, but are just accusations having no factual or legal support. It is the jury's role to determine the relative value of the experts' bases for their opinions, not a matter for this Court to decide at the in limine stage."</p> <p>"It is well-established that an expert witness may testify about the reasons for his opinion and the matter upon which it is based. Specifically, Evidence Code section 802 provides: "A witness testifying in the form of an opinion may state on direct examination the reasons for his opinion and the matter . . . upon which it is based, unless he is precluded by law from using such reasons or matter as a basis for his opinion." An expert may rely on inadmissible evidence to form his or her opinion. Evidence Code section 801, subdivision (b), expressly permits an expert to rely upon inadmissible evidence (such as hearsay articles) if it is "of a type that reasonably may be relied upon by an expert in forming an opinion upon the subject to which his testimony relates" (See <i>Isaacs v. Huntington Memorial Hospital</i> (1985) 38 Cal.3d 112, 133; 1 Jefferson, Cal. Evidence Benchbook (4th ed. 2010) § 30.40, p. 680.) It follows that expert witnesses may testify about an article or</p>	
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	<p>treatise upon which they reasonably base their opinion, even if that article or treatise is otherwise inadmissible.”</p> <p>The article’s findings are consistent with testing performed in 1976 at Mt. Sinai and testing by Colgate. (See id. at pp. 6-9.)</p> <p>The article can be used for non-hearsay purposes. (See id. at p. 9.)</p> <p>The article is not prejudicial. (See id. at p. 10.)</p>	
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No.	What to Exclude	Arguments	Ruling
22	Opinions and testimony by Plaintiffs’ expert Dr. David Fractor.	<p>The binders the parties provided to the Court do not include this motion or the opposition.</p> <p>The Court conducted a conference call with the parties on June 19th, and they admitted they had not filed briefs yet. Defendants served the motion on Lexis File & serve on June 20th but did not submit a hard copy to the Court as required. Plaintiffs submitted their opposition to the Court on June 21st.</p> <p>Defendants contend:</p> <p>“Dr. Fractor admitted that he did not consider the actual deposition testimony in this case in which both Plaintiffs testified regarding the <i>actual</i> household services performed by Plaintiff Carolyn Weirick (“Weirick”), nor did he consider the fact that Plaintiffs hired individuals to assist with certain services well before Weirick’s diagnosis. Dr. Fractor admitted that he simply provides a “benchmark” of household services for the average adult, and that he expects the jury to adjust the benchmark based upon the actual evidence in this case. Allowing the jury to hear a calculation of</p>	<p>Denied:</p> <p>The motion does appear to be untimely. The Court held the final status conference on June 11th. Under the Court’s protocol, the parties were required to meet and confer at the hearing and then provide the remaining motions in limine to the Court.</p> <p>Defendants did not e-serve this motion until June 20th, and never submitted a hard copy. The Court did not grant Defendants leave to file the motion late.</p> <p>But the Court denies the motion for a separate reason. This Court has held in other</p>

	<p>household services that far exceed the actual evidence in this case will be prejudicial to Defendants.” (Motion ,pp. 1-2.)</p> <p>“David Fractor, Ph.D. (“Fractor”) was deposed on June 1, 2018. Prior to his deposition, Plaintiffs produced Fractor’s Loss Summary Reports, which calculated \$8,484 in past household services and \$438,323 in future household services. (Declaration of Lindsay Weiss (“Weiss Decl.”), Exhibit A.) In making his determination regarding household services, Fractor testified that he used the Dollar Value of a Day to come up with the annual replacement costs for services that Weirick can no longer perform. (Weiss Decl., Exhibit B at 40:15-3; 43:25-44:14.) However, Fractor conceded that his valuation did not take into consideration the deposition testimony offered by the Plaintiffs regarding the activities Weirick does and does not perform around the house. (<i>Id.</i> at 44:15-48:6.) Fractor testified that his valuation is solely a “benchmark” that the jury can use to either add or subtract to, based on their opinion of whether Weirick falls within the general Dollar Value of a Day mold his calculations were based on. (<i>Id.</i>) Fractor has no opinion one way or another as [to] whether Weirick falls above or b[e]low the national average with regard to the activities that are listed on The Dollar Value of a Day tables which he used to calculate damages in this case. (<i>Id.</i> at 48:2-6).” (<i>Id.</i> at p. 2.)</p> <p>“In <i>In re Lockheed Litig. Cases</i> (2004) 115 Cal.App.4th 558, 563, the Court of Appeals construed Evidence Code section 801(b) to require that a trial court must determine that the matter relied on by an expert “provide[s] a reasonable basis for the particular opinion offered.” The Court rejected the plaintiffs’ argument that Evidence Code section 801(b) requires the trial court only to determine whether the type of matter on which an expert relied in forming his or her opinion is the type of matter on which an expert can reasonably rely in forming an opinion, without regard to whether</p>	<p>actions in the coordinated <i>LAOSD Asbestos Cases</i> that “loss of household services” is recoverable by personal-injury asbestos plaintiffs. Defendants contend Dr. Fractor’s opinion is unusual because he created a generic value based on the Dollar Value of a Day tables instead of quantifying the actual value of the actual household services Ms. Weirick provides. In <i>McKinney v. California Portland Cement</i>, however, the Court of Appeal affirmed a similar approach. The expert there used the Cornell University study – which “analyzed what people did around the home such as home repair and maintenance, automobile maintenance, yard work, cooking, cleaning, shopping and general home maintenance” – and “assumed that decedent was an average provider based on the study criteria.” (<i>McKinney</i> (2002) 96 Cal.App.4th 1214, 1229.) The expert “presented an estimated value of an average provider’s services in the</p>
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	<p>the matter on which the expert relied reasonably supports the particular opinion offered. (<i>In re Lockheed Litig. Case, supra</i>, 115 Cal.App.4th at p. 563.) The matter relied on must provide a reasonable basis for the particular opinion offered. (<i>Sargon Enterprises, Inc. v. University of Southern California</i> (2012) 55 Cal.4th at p. 770, citing <i>In re Lockheed Litig. Cases, supra</i>, at p. 564.) It is therefore improper to use conjectural and speculative matters to support an expert's opinion on any subject because those types of matters render the opinion unreliable and irrelevant. (<i>Korsak v. Atlas Hotels, Inc.</i> (1992) 2 Cal.App.4th 1516, 1524; see also <i>Jennings v. Palomar Pomerado Health Sys., Inc.</i> (2003) 114 Cal.App.4th 1108, 1118—expert must offer “reasoned explanation illuminating why the facts have convinced the expert.”) (Id. at pp. 3-4.)</p> <p>“In addition, Evidence Code section 802 provides that “[a] witness testifying in the form of an opinion may state...the reasons for his opinion and the matter...upon which it is based, unless he is precluded by law from using such reasons or matter as a basis for his opinion....[t]he court in its discretion may require that a witness before testifying in the form of an opinion be first examined concerning the matter upon which his opinion is based.” Thus, under Evidence Code section 802, not only may the trial court inquire into the expert's reasons for an opinion, and examine experts concerning the matter on which they base their opinion before admitting their testimony, it may also inquire into whether that material actually supports the expert's reasoning. (<i>Sargon Enterprises, Inc. v. University of Southern California, supra</i>, 55 Cal.4th at p. 771.)” (Id. at p. 4.)</p> <p>“Fractor calculates loss of household services beginning in February 2017 (the date of Weirick's diagnosis) through July 2, 2041. (Weiss Decl., Exhibit A). In calculating loss of household</p>	<p>home[.]” (Id.) The Court of Appeal held that the “estimate, coupled with the evidence of [decedent's] actual work around the house, was properly presented for the jury's consideration.” (Id. [emphasis added].) Subject to specific objections to specific evidence at trial, Plaintiffs here probably should receive the same opportunity to combine estimate evidence and “actual work” evidence. If Dr. Fractor has not done so, he can be subject to cross-examination on that point.</p>
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		<p>services, Fractor uses the Dollar Value of a Day survey tables, which he concedes provides benchmark numbers for average adults performing household services. (Weiss Decl., Exhibit B at 43:25-44:14). Despite the fact that Fractor was provided Weirick's deposition testimony, in which she testified regarding the services she actually performs – and those she does not – Fractor claims that he could not rely upon the deposition testimony to provide him the accurate number of hours a person spends performing certain services. (<i>Id.</i> at 44:15-45:11). Fractor admitted that he did not try to “parse it out at all” and did not determine which services Weirick actually performed. (<i>Id.</i> at 45:21-46:11). Fractor did not take into consideration the fact that Weirick testified that she has employed a housekeeper, a gardener and a nanny for some time and prior to her diagnosis, and he did not consider the testimony where Weirick actually discussed the amount of cooking, grocery shopping, bill paying and handyman work that Weirick performed prior to her diagnosis. (<i>Id.</i> at 46:12-48:1). Fractor testified that he simply provides a benchmark and then lets “the testimony drive that number at trial.” (<i>Id.</i> at 46:24-47:1).” (<i>Id.</i> at pp. 4-5.)</p> <p>“Similarly, Fractor did not take into consideration any of the testimony that Weirick's spouse gave regarding the services Weirick's spouse actually performed for the family home. (<i>Id.</i> at 47:16-20). Fractor has no opinion as to whether or not Weirick falls above or below the national average concerning the various activities that are listed on the Dollar Value of a Day tables, which he used to prepare his calculations in this case. (<i>Id.</i> at 48:2-6).” (<i>Id.</i> at p. 5.)</p> <p>“In addition, Dr. Fractor adopts the calculations performed by Plaintiffs' expert Karen Luckett with regard to damages associated with household services, and did not verify the accuracy of the information provided by Luckett nor did he perform his own</p>	
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	<p>investigation or research as to Plaintiffs' household services. Defendants refer the Court to their Motion <i>in Limine</i> No. 23, which challenges the foundation for Lockett's opinions in this matter. Accordingly, for the reasons set forth in Motion <i>in Limine</i> No. 23, Defendants respectfully request that the Court issue an order precluding Dr. Fractor from adopting the opinions of Karen Lockett." (Id.)</p> <p>Plaintiffs contend:</p> <p>"Defendants improperly seek to preclude Plaintiffs' economist Dr. David Fractor from providing opinions regarding Plaintiff Carolyn Weirick's loss of household services. First, Defendants' motion should be denied because it is untimely. Dr. Fractor was deposed in this matter on June 1, 2018 and Defendants did not file the instant motion until 19 days later on June 19, 2018, eight days after all motions <i>in limine</i> were due to the Court." (Opposition, p. 2.)</p> <p>"Second, even if this motion is considered by the Court, it should still be denied because Dr. Fractor's opinions regarding loss of household services are admissible under Evidence Code Section 801 and <i>McKinney v. California Portland Cement Co.</i> (2002) 96 Cal.App.4th 1214." (Id.)</p> <p>"The plaintiff seeking recovery has the burden to prove the "reasonable value" of the household services he or she will no longer be able to provide in the future as a result of his injuries and death. That evidence must come from an expert economist. (Evid. Code, section 801(a).)2 Plaintiffs have therefore designated Dr. Fractor to offer opinions regarding, among other things, the value of Carolyn's future household services. Dr. Fractor used the "Dollar Value of a Day"3 to come up with a benchmark number for Carolyn's loss of household services, both past and future. It is a</p>	
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		<p>number that the jury can use, and then based upon the evidence presented at trial regarding Carolyn's specific household duties and her inability to perform those duties, evaluate whether Carolyn's loss is more or less than the number provided by Dr. Fractor." (Id. at p. 3.)</p> <p>"Dr. Fractor's valuation of future loss of household services also includes services that Carolyn would have provided to her children had she not developed mesothelioma. To prove the reasonable cost of outside services, plaintiffs asked Life Care Planner Karen Luckett to prepare a report. Based on Dr. Fractor's review of Luckett's report, and his conversation with her, Dr. Fractor has formed opinions regarding the economic value of that component." (Id.)</p> <p>"Under California law, an economist may rely only on estimates derived from statistical data in forming an opinion about loss of household services. The Court in <i>McKinney v. California Portland Cement Co.</i> held that it was appropriate for Plaintiffs' economist Dr. Ben-Zion's rely on the Cornell Universe study that analyzed household services to calculate Plaintiffs' loss. <i>McKinney v. California Portland Cement Co.</i> (2002) 96 Cal.App.4th 1214, 1229. The Court stated that Dr. Ben-Zion's use of the study "presented an estimated value of an average provider's services in the home. This estimate, coupled with the evidence of Roland McKinney's actual work around the house, was properly presented for the jury's consideration. (Id.) Dr. Ben-Zion explained at trial that the jury then evaluates the evidence regarding the particular individual and household duties performed by that individual, and then decides whether that individual did more or less than the average and had more than average skills in determining the value of the services. (Id.)" (Id. at pp. 3-4.)</p>	
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		<p>“Here, Dr. Fractor does exactly what California law allows him to do, relies on a study that provides statistical data regarding household services, comes up with a benchmark for the jury and allows the jury to decide whether Carolyn’s services would fall above or below his benchmark number. Defendants fail to acknowledge the law and argue that Dr. Fractor’s opinions are speculative and should not be admissible because he did not take into consideration Carolyn’s testimony about her inability to perform certain household duties. Striking Dr. Fractor’s opinions regarding future loss of household services or limiting the number is not for the judge to decide. It is for the fact finder determine after all of the evidence is presented.” (Id. at p. 4.)</p> <p>Dr. Fractor may rely on Karen Lockett’s report no matter whether it is hearsay. (See id. at pp. 4-5.)</p> <p>Dr. Fractor is qualified to testify about a Life Care Plan, and his opinions are relevant to the “household services” component of future economic damages. (See id. at pp. 5-7.)</p>	
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No.	What to Exclude	Arguments	Ruling
23	Opinions and testimony by Plaintiffs’ expert Karen Lockett.	<p>During the June 19th conference call, Plaintiffs informed the Court that they would be filing an opposition. They provided a hard copy to the Court on June 21st.</p> <p>Defendants contend:</p> <p>“The expert discovery cut-off in this action was May 14, 2018. On February 23, 2018, Plaintiffs designated Karen Lockett as an expert witness, and the parties agreed Ms. Lockett would be deposed on May 14, 2018. Just days before Ms. Lockett’s scheduled deposition, however, Plaintiffs unilaterally removed the deposition</p>	<p>Denied:</p> <p>Ms. Lockett’s deposition occurred after the discovery cutoff, but the Court declines to exclude her on this ground. Her deposition finished last week, and Defendants were able to question her. Defendants did not suffer prejudice.</p>

	<p>from the case's calendar, providing no explanation at the time. Later, Plaintiffs would explain that Ms. Luckett suffered "toxic poisoning" that precluded her from testifying as scheduled. Once her deposition eventually convened, however, Ms. Luckett testified she had been ready and able to testify." (Motion, p. 3.)</p> <p>"This feels like game-playing that exceeds even the usual scenario of late-deposed experts. Even so, defendants would not complain for this reason alone. But there is more here than the flouting of deadlines. Defendants eventually deposed Ms. Luckett on May 22, 2018. After that deposition, she dramatically revised her report—and plaintiffs have now offered Ms. Luckett for yet another deposition. So, a late report has been supplanted by an even later one, and a late, still-untaken deposition is meant to supplement her prior, late testimony. Ms. Luckett gets to "fix" her report and her testimony, and defendants—and their reciprocal damages expert—are left to react at the last minute." (Id.)</p> <p>"Ms. Luckett is not qualified to opine on life care plans for patients with mesothelioma. Her experience and expertise in life care planning is with plaintiffs who have been diagnosed with orthopedic injuries – not cancers, let alone mesothelioma. Accordingly, many of Ms. Luckett's opinions are speculative and lack foundation. As an example: Ms. Luckett included costs for future medical costs—such as alternative therapies, surgical interventions, and hospitalizations — based solely on her independent research on cancer from the American Cancer Society's website and not in relation to Ms. Weirick's current condition or recommendations from Ms. Weirick's treating physicians." (Id. at p. 4.)</p> <p>"Ms. Luckett's opinion regarding the future value of Ms. Weirick's medical services is inadmissible. Ms. Luckett improperly calculated</p>	<p>The Court finds Ms. Luckett qualified to testify. She is a practicing life-care planner. She has testified in 70 cases, including cases involving personal injuries and products liability, and has never been disqualified. (See Blumenfeld-James Decl., Ex. A, pp. 8-9.) Markedly, she testified that she agreed with Defendants' standards and methodology (the International Academy of Life Care Planners Standards of Practice) and followed the steps. (See id. at Ex. A, pp. 220-224.)</p> <p>Defendants' assertion – Ms. Luckett is unqualified because she hasn't worked on many mesothelioma cases – is unpersuasive. "[T]here is no requirement that the expert have experience in the particular field of his or her testimony[.]" (Wegner et al., Cal. Practice Guide: Civil Trials and Evidence (The Rutter Group 2018) ¶ 8:737.) The expert can testify if he or she shows "a 'special'</p>
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	<p>Ms. Weirick’s future medical damages based on the amounts that providers bill for medical services and equipment, rather than the lesser amounts accepted as full payment.” (Id.)</p> <p>“Ms. Luckett’s life care plan includes damages for loss of future household services, which is not a proper element of economic loss pursuant to Civil Code Section 1431.2(b)(1). Compounding this error, Ms. Luckett’s calculations are further flawed because she used an average value of all services performed by married homemakers, rather than basing her calculations on the specific, more limited services Ms. Weirick actually performed before her mesothelioma diagnosis. Similarly, Ms. Luckett’s life care plan includes costs for Ms. Weirick’s children that are simply not recoverable in a personal injury action—such as expenses for her three children to attend college and receive grief counseling and financial planning services. It is well established under California law that there is no right to recovery for loss of parental consortium in a personal injury action.” (Id.)</p> <p>Plaintiffs contend:</p> <p>“Karen Luckett was offered for deposition on May 14, 2018, the last day of expert discovery. (Blumenfeld-James Dec. ¶ 2). However, on May 8, 2018 Ms. Luckett experienced an incident with her car that caused her to inhale toxic fumes that burned her lungs making it hard for her to breath and talk. This made it impossible for Ms. Luckett to finish her work on the case, and sit for deposition on May 14, 2018.” (Opposition, p. 2.)</p> <p>Defendants did not experience prejudice: “In their motion, Defendants make the factual statement that Ms. Luckett’s deposition took place after the close of expert discovery. But what they do not state, is how this prejudiced them. The reason for this is</p>	<p>knowledge of the subject matter.” (Id.) In accordance with the International Academy of Life Care Planners Standards of Practice (see Blumenfeld-James Decl., Ex. B, p. 7), Ms. Luckett said she “did research on it and I read the medical records and talked to the doctors for a recommendation.” (Id. at Ex. A, pp. 220-224.)</p> <p>The parties’ dispute about the cost of future medical care is a trial issue. The various manners in which such damages are estimated are normally subject to dispute because of the unsettled nature of the medical marketplace. This matter should be addressed through cross-examination.</p> <p>As to loss of future household services, which includes loss of services to children, the motion is denied without prejudice to specific objection at trial to particular items. It would appear that the Plaintiff can recover the value of</p>
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	<p>simple: It did not. Plaintiffs agreed to take Defendants' economist after Ms. Luckett was deposed. (Blumenfeld-James Dec. ¶ 4). Defendants' expert was on vacation from June 1 until June 18. (<i>Id.</i>) As a result, Ms. Dolan has not yet issued her report/opinions. As such, she has had ample time to review the materials and express her opinion. The fact that Ms. Luckett's deposition took place after May 14, 2018, has no prejudicial effects on Defendants." (<i>Id.</i> at p. 3.)</p> <p>Ms. Luckett is qualified and has never been disqualified as an expert: "Karen Luckett is an experienced life care planner, who followed the normal process of life care planning in this case. Defendants allege that because she has not worked with many cases involving an individual diagnosed with mesothelioma, she is somehow unable to provide an opinion in this case. However, this is not accurate. Life Care Planners, often encounter new injuries or types of care, and are provided with a guideline of how to handle this situation. During her deposition, Ms. Luckett was shown the International Academy of Life Care Planners Standards of Practice by defense counsel. (Blumenfeld-James Dec. Exhibit B). This is the guideline that explains how a life care planner would handle a new situation. And as Ms. Luckett explained, she did exactly that in this case[.]" (<i>Id.</i> at p. 4; see also <i>id.</i> at pp. 5-6.)</p> <p>Ms. Luckett's opinions regarding the costs of future medical care should be addressed by cross-examination, not exclusion. (See <i>id.</i> at p. 7.)</p> <p>Plaintiffs are entitled to recover loss of future household services: "the annotated CACI explains that Plaintiffs are entitled to future loss of household services when the injury occurs, which is now. As the Court explained in <i>Overly v. Ingalls Shipyard, Inc.</i>, which is cited in CACI: ["Although the parties do not distinguish between</p>	<p>services that she would have provided to her son during her lifetime had there not been the injury alleged.</p> <p>The Court does grant the motion in part to exclude the claimed damages for the loss of the ability to pay college tuition. Among other things, this represents a double recovery for loss of income. Damages for grief counseling are likewise excluded as they do not appear to be proximately caused by the event at issue. Rather, they are an ineluctable fact of life irrespective of the cause or timing of a parent's death.</p>
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the different types of lost years damages that were awarded, we note that lost household services damages, are different than other types of future earnings included in this category. Generally household services damages represent the detriment suffered when injury prevents a person from contributing some or all of his or her customary services to the family unit. The justification for awarding this type of damage as compensated for the value of the services he would have performed during the lost years which, because of the injury, will now have to be performed by someone else.['']” (Id.)

“Ms. Luckett’s opinions regarding Ms. Weirick’s children fall under “household services” component of the Ms. Weirick’s future economic damages. Plaintiffs’ household services include services she contributes to the family unit, and here the family unit includes a three minor children, one of whom is autistic. As stated above, “(g)enerally household services damages represent the detriment suffered when injury prevents a person *from contributing some or all of his or her customary services to the family unit.* (Overly at 174 (emphasis added).)” (Id. at p. 8.)

“While the value of household services can be calculated using statistical data regarding the contributions of an “average” provider, California also recognizes that the economic value of a particular individual’s contribution may, on a case-by-case basis, be more or less than the average. An expert may rely not just on estimates derived from statistical data but actual, case-specific evidence. (*McKinney v. California Portland Cement Co.* (2002) 96 Cal.App.4th 1214, 1229.) The specifics of this particular case demonstrate that Carolyn Weirick’s contribution to her household was substantially greater than the average, and the life care plan supports plaintiffs’ ability, through their experts, to meet their burden of proving the reasonable value of all potential loss.” (Id.)

		<p>“But for Ms. Weirick’s diagnosis with mesothelioma, she would have continued to work to support both her wife and her sons. Her future inability to provide income and other support for the additional costs and expenses associated with her sons was caused by the disease which resulted from defendants’ negligence and strict liability. Defendant should not be able to sidestep the peculiarities of this family’s situation. Stated otherwise, Carolyn Weirick’s family situation is an “eggshell” situation, whereby defendant must take him as they find him and, in this case, they must take the financial burden occasioned by her disease and eventual death.” (Id. at pp. 8-9.)</p>	
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No.	What to Exclude	Arguments	Ruling
25	Opinions and testimony by Plaintiffs’ expert William Longo.	<p>Defendants contend:</p> <p>“Over the last year, Dr. Longo has received 35 containers of purported J&J talcum powder products from various sources, including three different plaintiff law firms. Those law firms obtained these containers from a hodgepodge of sources: some came from unrelated plaintiffs, others came from unidentified “collectors,” and still others were purchased on sites like eBay. Most had been opened and used before Dr. Longo received them for testing. Dr. Longo purports to have found trace levels of “asbestos” in 20 out of 35 samples that he tested.” (Motion, p. 1.)</p> <p>“Dr. Longo’s testing of the samples was unreliable at every step and must be excluded. First, Plaintiffs have failed to establish that the samples Dr. Longo analyzed contained the J&J Defendants’ talcum powder in its original, unaltered condition. Most of the samples are more than a half-century old, and there is no information about how they were handled or stored before Dr.</p>	<p>Denied in part; Granted in part:</p> <p>The first issue regards chain of custody. Dr. Longo ultimately tested 35 Johnson & Johnson containers – 32 Baby Powder and three Shower-to-Shower. (See Opposition, p. 7.) Confusingly, portions of the parties’ briefs discuss 30 containers while other portions discuss 35.</p> <p>Expert testimony about tested samples may be excluded based on a “chain of custody” claim. (See <i>People v. Catlin</i></p>

		<p>Longo received them—other than that most had been opened. There is a real risk that the samples Dr. Longo tested were contaminated after they were manufactured and sold. This is a particularly troubling possibility because Dr. Longo identified richterite—a mineral not known to be present in the talc mines at issue but present in insulation in the 1970s—in some of the samples and did not identify amphiboles in any brand new, “off-the-shelf,” sealed samples that he tested. Similarly, because it is possible for people to refill talcum powder containers, there is a real risk that the products Dr. Longo tested were not manufactured by the J&J Defendants at all.” (Id.; see also id. at pp. 4-11.)</p> <p>“In sum, serious chain of custody issues make it impossible to know whether Dr. Longo was in fact testing the J&J Defendants’ talcum powder in its original, unaltered condition. As a result, his testing must be excluded, as two other California courts and additional courts in other jurisdictions have concluded with respect to similar testing conducted under similar circumstances.” (Id. at pp. 1-2; see also id. at pp. 4-11.)</p> <p>“Second, Dr. Longo did not adhere to a generally accepted methodology for identifying asbestos. Dr. Longo performed an analysis that he admits is incapable of distinguishing between asbestiform and non-asbestiform fibers—in other words, between minerals that are asbestos and minerals that are not. Instead, Longo assumes that the amphibole particles he detected were asbestos even though the asbestiform varieties of these minerals are exceedingly rare, and has repeatedly been unable to point to any support for this assumption. He further assumes, without foundation and indeed contrary to his findings, that the purported contamination he identifies is homogeneous throughout the tested samples.” (Id. at p. 2; see also id. at pp. 11-16.)</p>	<p>(2001) 26 Cal.4th 81, 134.) “In a chain of custody claim, “[t]he burden on the party offering the evidence is to show to the satisfaction of the trial court that, taking all the circumstances into account including the ease or difficulty with which the particular evidence could have been altered, it is reasonably certain that there was no alteration. [¶] The requirement of reasonable certainty is not met when some vital link in the chain of possession is not accounted for, because then it is as likely as not that the evidence analyzed was not the evidence originally received. Left to such speculation the court must exclude the evidence. [Citations.] Conversely, when it is the barest speculation that there was tampering, it is proper to admit the evidence and let what doubt remains go to its weight.” [Citations.]” (Id.)</p> <p>In this case, the contamination alleged is a very low level, so low that it is detectable only by</p>
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		<p>“Third, Dr. Longo cannot extrapolate the results of his analysis of the samples to conclude that the talcum powder Ms. Weirick actually used would have been contaminated with asbestos. He conducts no analysis, statistical or otherwise, to reach this conclusion. Dr. Longo is not entitled to simply guess that his test results are applicable to the Johnson’s Baby Powder or Shower to Shower actually used by Ms. Weirick. “ (Id. at p. 2; see also id. at pp. 16-19.)</p> <p>“Finally, Dr. Longo has issued multiple reports and supplemental reports in this case, all of which set forth the results of one test method for identifying amphibole particles: TEM analysis. Because Dr. Longo has never referred to any other testing in his reports and deposition, he should be precluded about doing so at trial.” (Id. at p. 2; see also id. at pp. 19-20.)</p> <p>Chanel contends:</p> <p>Chanel filed a separate motion in limine concerning Dr. Longo. It is Chanel’s motion in limine no. 29. Chanel contends Dr. Longo should be excluded because (1) he admitted that he never tested a Chanel product, (2) he did not review tests from other labs that detected asbestos in Chanel products, (3) he “had no information about the source of any talc incorporated into Chanel No. 5, including whether Chanel ever sourced its talc from the Vermont mine that many of the samples Dr. Longo tested contained[,]” and (4) “he conceded that asbestos contamination within talc mines is inconsistent and varied.” (Chanel MIL No. 29, p. 1.)</p> <p>Plaintiffs contend:</p> <p>“At least four courts, two in Los Angeles County, California, one in Middlesex County, New Jersey, and one in Darlington County,</p>	<p>the Plaintiffs’ experts using electronic microscopes. As such it is necessary that there be some assurance that the sample was free from the possibility of contamination from any number of sources.</p> <p>Here, the samples came from multiple sources (clients, collectors, and off-the-shelf purchases by the plaintiff firms) and multiple eras (unknown, 1950s, 1960s, 1970s, 1990s, 2000s, and 2010s). Plaintiffs claim “Dr. Longo has chain of custody documentation for each of the 30 [now 35] samples he tested.” (Opposition, p. 15.) They cite Dr. Longo’s expert report, sections 2, 3, and 4. (See id. at p. 15 n. 66.) These sections contain transport slips that merely identify the person who sent the sample, by UPS or FedEx, and the person who received the delivery. (See Stewart Decl., Ex. A.) The testing charts, similarly, say nothing about chain of custody. (See id. at Ex. 9, pp. 3-4, 9-22.) None of this</p>
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	<p>South Carolina, have considered and denied Johnson & Johnson's challenges to Dr. Longo's opinions. In the first mesothelioma trial against Johnson & Johnson, Judge Simpson ruled that based on the extensive documentation before him, a 402 hearing was unnecessary and Dr. Longo would be allowed to testify as to his testing of the historical samples. Similarly, Judge Ana Viscomi, in the state court of New Jersey, after hearing Dr. Longo's testimony during a full contested hearing, ordered that 'What the Court found compelling was the testimony of Dr. Longo insofar as he found that by doing the testing, the consistency of the product throughout and some of the tests that he conducted revealed the presence of asbestos. Some did not and so based upon his argument as to the consistency, which the Court found compelling, as to it being an indicia of reliability, the Court finds that it would be appropriate to deny the motion to exclude, allow the testimony, but certainly there are issues that would go to the weight of the evidence.'" (Opposition, p. 1.)</p> <p>"In South Carolina, Dr. Longo was permitted to testify regarding his analyses of Johnson & Johnson baby powder that included talc from the Vermont mine. The samples about which he was permitted to testify were limited to the Vermont talc due to the plaintiff's exposure occurring only during years in which that talc was incorporated into Johnson's Baby Powder." (Id. at pp. 1-2.) In West Covina, Judge Gloria White-Brown overruled all of Johnson & Johnson's objections to Dr. Longo's testimony in the Anderson trial. Notably, Johnson & Johnson has requested in the alternative a 402 hearing regarding Dr. Longo; in the Anderson case, with Dr. Longo literally waiting in the hall, counsel for Johnson & Johnson waived this request. In the ongoing Brick v. Johnson & Johnson matter, Johnson & Johnson and Plaintiffs' counsel reached an agreement permitting Dr. Longo regarding the exact same testing at issue in the instant Motion." (Id. at pp. 1-2.)</p>	<p>evidence clears up the gap between the manufacture dates and the testing dates. Plaintiffs' showing fails to explain how the samples were stored, repackaged, delivered, etc. (See Opposition, pp. 9-10.)</p> <p>On this record, under California law, this Court finds Plaintiffs' "chain of custody" showing inadequate. The motion is granted as to the test results for these samples and Dr. Longo's related testimony and opinions. Given the low levels of asbestos to which the Plaintiffs' experts are referring, the samples must have a chain of custody that prevents contamination.</p> <p>As for Defendants' other arguments, the gatekeeper role of a court "is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant</p>
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		<p>“The substance of Johnson & Johnson’s challenge to Dr. Longo in this case is the same as that which has been repeatedly – and unanimously – rejected by every judge who has considered the issue. In fact, the development of additional evidence since the last hearings on this subject have only continued to support and buttress Dr. Longo’s work.” (Id. at p. 2.)</p> <p>Dr. Longo’s methodology (the Blount method) is recognized and approved. Defendants’ experts endorse and use it. (See id. at pp. 3-11.)</p> <p>The FDA method is inadequate: “Not even the FDA follows the ‘FDA Method,’⁵⁸ and neither do Defendants’ experts. Firstly, it is misleading to suggest there is an ‘FDA Method.’ What Defendants reference here is the test for Absence from Asbestos published by the United States Pharmacopeia (USP), a private standards organization. The current USP test method for asbestos in talc doesn’t even require TEM analysis, carries a significant risk of false negatives and the USP panel brought together to modernize the standard says as much.⁵⁹ Dr. Longo stated that, ‘the USP...uses IR and...of course infrared analysis is a method that has been discredited many years ago for determining the amount of asbestos in anything, and it’s not recognized by anybody, and XRD, of course, has its problems and optical has its problems...But the technique...is not really designed to see the concentrations of trace [asbestos] in the characterizations such as we can do with TEM. Hopefully the USP will be a TEM method because that is the most precise method.’” (Id. at p. 11.)</p> <p>Asbestiform v. non-asbestiform: Defendants accurately point out that Dr. Longo did not attempt to distinguish asbestiform vs. non-asbestiform, referring to the growth habit of the particles he</p>	<p>field.” (<i>Sargon</i> (2012) 55 Cal.4th 747, 772.) The court should “exclude expert opinion testimony that is (1) based on matter of a type on which an expert may not reasonably rely, (2) based on reasons unsupported by the material on which the expert relies, or (3) speculative.” (Id. at 771-72.)</p> <p>“But courts must also be cautious in excluding expert testimony. The trial court’s gatekeeping role does not involve choosing between competing expert opinions. The high court warned that the gatekeeper’s focus ‘must be solely on principles and methodology, not on the conclusions that they generate.’” (Id. at 772.)</p> <p>“The court must not weigh an opinion’s probative value or substitute its own opinion for the expert’s opinion. Rather, the court must simply determine whether the matter relied on can provide a reasonable basis for the opinion or whether that</p>
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	<p>identified. He complied with the EPA/AHERA counting protocol for regulated asbestos fibers.⁶¹ As discussed and established in connection with Plaintiff's Motion in Limine #14, no asbestos counting methods require a prerequisite geological finding that a regulated particle is "asbestiform" or not, including AHERA. "Asbestiform" is a commercial geological distinction designed to designate certain asbestos deposits as commercially desirable or not. It has zero relevance to the health hazard of the material." (Id. at p. 12.)</p> <p>Dr. Longo may rely on "off the shelf" and historical samples: "There are five reasons why Dr. Longo may rely upon the samples he tested. First, as an expert material scientist, Dr. Longo and countless other researchers routinely rely upon historical samples to determine their contents. Second, the samples are what they purport to be: Johnson & Johnson talc with no signs or allegations that they are contaminated or have ever been tampered with. Third, ten samples for which there can be no "authenticity" challenge (off the shelf and client-owned samples) are consistent in every way with the other twenty samples. Another sample was obtained directly from Johnson & Johnson. Fourth, Dr. Longo took an extra step to confirm the uniformity of the samples by running a particle size distribution analysis. Fifth, the results are precisely in line with dozens of Johnson & Johnson's internal tests, third party testing, and admissions." (Id. at p. 15; see also id. at pp. 16-22.)</p> <p>Experts reasonably rely on "off the shelf" and historical samples. (See id. at pp. 22-24.)</p> <p>Authentication is unnecessary since Plaintiffs do not seek to introduce the talc ore or historical containers. (See id. at pp. 24-27.)</p>	<p>opinion is based on a leap of logic or conjecture. The court does not resolve scientific controversies. Rather, it conducts a 'circumscribed inquiry' to 'determine whether, as a matter of logic, the studies and information cited by experts adequately support the conclusion that the expert's general theory or technique is valid.'" (Id.)</p> <p>"If the opinion is based on materials on which the expert may reasonably rely and is grounded in logic flowing from those materials, the opinion should be allowed even when the court or other experts disagree with its conclusion or the methods and materials used to arrive at it." (Wegner et al., Cal. Practice Guide: Civil Trials and Evidence (The Rutter Group 2018) ¶ 11:77.)</p> <p>Defendants contend Dr. Longo failed to "adhere to a generally accepted methodology for identifying asbestos." (Motion, p. 2.)</p>
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	<p>California law permits experts to rely on historical samples; and Dr. Longo has adequate foundation to testify about Ms. Weirick's exposures. (See <i>id.</i> at pp. 27-28.)</p> <p>Plaintiffs properly disclosed Dr. Longo's SEM analysis. (See <i>id.</i> at p. 29.)</p> <p>As to Chanel, Dr. Longo will not testify directly that talc used in Chanel products contained asbestos, but he may answer hypothetical questions that ask him to assume Chanel used Italian talc in Chanel No. 5. He will be able to lay foundation to answer the hypotheticals. (See <i>id.</i> at p. 30.)</p>	<p>Under <i>Sargon</i>, the Court is not supposed to pick one scientific method over another; the Court's role, simply, is to determine whether the expert used a recognized, viable method. There is at least some evidence that defendants' experts and consultants have used these methods. (See Opposition, p. 7; see also, e.g., Blumenfeld-James Decl., Ex. 6.) A defense geology expert, Mickey Gunter, said he had no criticism of the "Blount Method." (See <i>id.</i> at Ex. 17, pp. 165-166.)</p> <p>Dr. Longo also utilizes scanning electron microscopy ("SEM"). Defendants suggest his SEM findings should be excluded because Plaintiffs failed to disclose his SEM analysis. The Court declines to adopt the argument because Dr. Longo testified about his SEM findings at his deposition, and Defendants cross-examined him. (See Opposition, p. 29; see also</p>
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			<p>Blumenfeld-James Decl., Ex. 40.)</p> <p>Dr. Longo's counting methodology also appears to be a matter of legitimate scientific debate, at least on this record.</p> <p>Accordingly, the motion is denied as to Dr. Longo's methodology, his use of TEM and SEM, and his counting methodology. This is a scientific debate that the Court cannot resolve as a matter of law.</p> <p>Dr. Longo's ability to extrapolate requires different analysis. Dr. Longo's expert report states: "Based on the results of our analysis, it can be stated, that individuals who used Johnson & Johnson's Baby Powder or Valiant Shower to Shower talc products would have, more likely than not, been exposed to fibrous amphibole asbestos. (See Stewart Decl., Ex. A, p. 25.) He reached this opinion by detecting asbestos in 17 of</p>
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			<p>30 containers. (See id. at Ex. A, pp. 2, 23.) Plaintiffs fail to show how these results provide a reliable means to extrapolate a likelihood of asbestos contamination and exposures above background levels. A 57% positive rate among containers lacking “chain of custody” evidence is a dubious foundation. The opposition papers fail to cure this deficiency. Dr. Longo’s extrapolation of general conclusions about the product from these samples is excluded.</p> <p>Plaintiffs did address Chanel’s separate argument, and quoted the foundation for Dr. Longo’s opinion that the product contains asbestos. This foundation is inadequate to support the opinion given, and that opinion is excluded.</p>
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No.	What to Exclude	Arguments	Ruling
27	Opinions and testimony by	Defendants contend:	Denied in part; Granted in part:

	<p>Plaintiffs' expert Dr. Steven Compton.</p>	<p>Dr. Steven Compton did not test any sample actually used by Ms. Weirick. He tested 13 samples obtained by Alan Seagrave from the Italian mines and 15 samples from the Argonaut mine in Vermont. He intends to testify that the samples contained asbestos. He also intends to testify that (1) all or most talc from the mines contained asbestos, and (2) because of the extensive contamination, the bottles used by Ms. Weirick must have contained asbestos.</p> <p>His testimony should be excluded because (1) he used an improper methodology that failed to determine whether the fibers he observed constituted asbestiform, and (2) his opinion that all or most talc from the mines contained asbestos is based on speculation and conjecture. His testing of a few samples is insufficient to support this leap. (See Motion, pp. 1-2; see also <i>id.</i> at pp. 4-8.)</p> <p>The Court should prohibit Dr. Compton from testifying about Chinese mines and the Hamm and Rainbow Vermont mines because he did not test samples from these sources. (See <i>id.</i> at pp. 8-9.)</p> <p>Chanel contends:</p> <p>Chanel filed a separate motion in limine – Chanel motion in limine no. 30. Chanel contends “[t]here are many issues with Dr. Compton’s opinions and anticipated testimony. First, Dr. Compton’s methodology was improper, is not generally accepted by the scientific community, and is therefore unreliable. Dr. Compton is also not a geologist with the requisite educational background to opine on the morphology and geological components of the minerals he tested. On those bases alone, Dr. Compton’s opinions and testimony attendant to his testing of Italian talc should be excluded from trial. Moreover, specifically as to Chanel, Dr. Compton has no basis to offer any opinions that Chanel</p>	<p>Defendants do not assert a “chain of custody” claim. It’s undisputed that Dr. Compton received the talc samples from Defendants’ experts.</p> <p>Defendants contend Dr. Compton employed an unscientific methodology. They claim he admitted that his methodology “does not distinguish between the asbestos and non-asbestos varieties of the amphibole minerals he identified.” (Motion, p. 2.) Defendants say this is a problem “because the EPA and ISO [International Organization for Standardization] methods that Dr. Compton claims to be following make that distinction – they define ‘asbestos’ as the <i>asbestiform</i> version of the mineral.” (Motion, p. 2.)</p> <p>Again, the Court’s role under <i>Sargon</i> 2012) 55 Cal.4th 747 is to determine whether the expert used a recognized, viable scientific method, not to choose one method over another.</p>
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		<p>No. 5 was contaminated with asbestos. Dr. Compton has only tested Italian talc. He has not tested a Chanel product for this case, despite having one in his very possession. Dr. Compton further testified during his deposition that he does not know the origin of the talc incorporated into any Chanel No. 5, and has not formed the opinion that any Chanel product has ever contained asbestos. Accordingly, even assuming Dr. Compton's findings of asbestos in some of the Italian talc tested are accurate and reliable – which, as will be explained in greater detail below, they are not – there is absolutely no foundation for Plaintiffs to assert that Dr. Compton's testing of Italian talc therefore establishes that the talc incorporated into Chanel No. 5 was necessarily contaminated with asbestos. Just because Dr. Compton allegedly found asbestos in <i>some</i> (not all) of the Italian talc samples he tested using unreliable methodologies, does not therefore mean that <i>all</i> Italian talc incorporated into talcum powder products were contaminated." (Chanel's Motion, pp. 1-2.)</p> <p>Plaintiffs contend:</p> <p>"[N]ear the end of 2015, Imerys' lawyers hired two expert geologists/mineralogists (Alan Segrave and Defendants' expert Matthew Sanchez, Ph.D.), provided them a paid trip to Italy, and gave them a tour of the talc mines in Val Chisone/Val Germanasca. Segrave and Sanchez collected samples of talc and associated minerals they considered representative of the Italian-mined talc historically sold by Imerys and its predecessors to Johnson & Johnson and many other talc product manufacturers. Segrave and Sanchez analyzed the samples and submitted reports to Imerys's lawyers, concluding that talc produced from the Italian mines did not now and had never contained asbestos.¹ Segrave produced his samples to Plaintiffs' expert Dr. Compton for analysis. Dr.</p>	<p>At this point, this court cannot say that Dr. Compton's methods are so unreliable that the jury should not be able to consider them. This is a matter best demonstrated through oppositional evidence or cross-examination as both parties' experts will be examining essentially the same samples.</p> <p>Likewise, on this record, the Court cannot determine that Dr. Compton's counting rules are so unreliable that they must be excluded. The appropriateness appears to be the subject of a debate between the parties' witnesses, and an issue for the trier of fact.</p> <p>At this point, the testing methodology employed by Dr. Compton seems reasonably subject to scientific dispute, and the Court declines to exclude it under <i>Sargon</i>.</p> <p>In summary, the Court denies the motion as to Dr. Compton's methodology and counting methodology.</p>
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		<p>Compton found that 11 of 13 samples did, in fact, contain asbestos.” (Opposition, p. 2.)</p> <p>“Dr. Compton also recently tested 15 samples he received from Dr. Sanchez, initially collected by Johnson & Johnson expert Mickey Gunter from the Argonaut mine in Vermont.³ Dr. Compton detected amphibole fibers in ten of the fifteen samples, including 6 of the 7 talc samples provided. . . . As a preliminary matter, it must be noted that very similar motions against Dr. Compton have been filed in multiple talc trials, and either rejected by the court or waived by the Defendants each time.” (Id. at pp. 2-3.)</p> <p>“In the Herford case tried in October of 2017 in Pasadena in front of Judge C. Edward Simpson, the Court allowed Dr. Compton to testify about his testing of Mr. Segrave’s Italian samples: “I think [Dr. Compton] can testify about his tests, what he tested, and I think he might also be able to testify that based upon his tests the mine from which the product was taken contained asbestos.” In the recent Anderson trial, Defendant J&J filed a similar motion in limine, but chose not to argue the MIL. Dr. Compton testified regarding his analysis of both the Italian source ore and the Vermont source ore, and was subject to cross-examination regarding these tests. In the Brick matter, currently in trial in Los Angeles County before Judge Stephen Moloney, Defendants J&J and Imerys filed a similar MIL, but an agreement was reached pursuant to which Dr. Compton was permitted to testify regarding his analysis of both Italian and Vermont mine samples. Finally, in the Lyons matter, recently in trial in San Francisco, Defendant Colgate’s challenge to Dr. Compton’s analysis of the Italian samples (again, the Vermont samples were not at issue) was summarily denied.” (Id. at p. 3.)</p>	<p>As to the extrapolation opinions of Dr. Compton, the Court grants the motion based upon the same analysis as contained in Motion in Limine 25. The analysis appears to be a logical leap that cannot be supported by quantitative analysis. Plaintiffs do not appear to oppose this aspect of the motion.</p> <p>The Court excludes opinions about the content of the actual containers of talc used by Ms. Weirick. Plaintiffs do not appear to oppose this aspect of the motion.</p> <p>The Court excludes opinions about the Guagxi region of China or the Hamm or Rainbow mines in Vermont. Plaintiffs do not seem to oppose this aspect of the motion.</p> <p>As with motion 25, there is insufficient foundation for Dr. Compton to testify regarding Chanel’s product, and his</p>
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	<p>Dr. Compton utilized accepted scientific testing methods: “J&J has seized upon one sentence taken out of context in the method that Dr. Compton uses from his tests, ISO 10312. They claim that the method cannot distinguish between asbestos and non-asbestos, and therefore is an unreliable method. Their critiques are clearly taken out of context. ISO stands for the International Organization for Standardization, and is one of the primary international organizations that promulgates testing methodology. The title of the particular method that Dr. Compton uses is: “Ambient air - Determination of asbestos fibers- Direct transfer transmission electron microscopy method.”¹⁶ (Emphasis added) So the method that Defendants vehemently claim cannot ever determine the presence of asbestos fibers was actually created for the explicit purpose of doing just that.” (Id. at p. 5.)</p> <p>“In addition, the ISO includes this language in the introduction to the method that Dr. Compton utilizes: ‘This international Standard is based on transmission electron microscopy, which has adequate resolution to allow detection of small fibers, and is currently the only technique capable of unequivocal identification of the majority of individual fibers of asbestos.’” (Id.)</p> <p>Dr. Compton utilized ISO 10312 to analyze the talc samples received from Alan Segrave for the presence of asbestos. While the Defendants lawyers spend several pages of their motion complaining that Dr. Compton “did not apply a scientific methodology to identify asbestos,”¹⁹ their retained experts do not share that view. Mickey Gunter, an expert who has been retained in other cosmetic talc cases by J&J, was particularly clear on this point when testifying about Dr. Compton’s methodology in analyzing the Italian talc samples: Q. With regard to Dr. Compton’s analysis of the samples that he obtained, do you have any criticism of the methodology that he used in doing so? A. Maybe not the</p>	<p>opinions regarding the Chanel product, if any, are excluded.</p>
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		<p>methodology, but the results.” (Id. at pp. 5-6.) “Dr. Compton employed the same methodology in analyzing the Vermont samples, collected by the same Mickey Gunter who endorsed that method with respect to the Italian samples.” (Id. at p. 6.)</p> <p>Dr. Compton’s analysis of samples from the Italian mines is a reliable basis for his exposure and causation opinions: “Although Defendants’ Motion combines the representativeness of the Italian talc samples and the Vermont talc samples into one issue, in fact these are very distinct. Dr. Compton, relying on the type of materials on which experts in his field typically relies, has an adequate foundation to opine that the Italian talc samples he analyzed are representative of the current and past mining output of the Italian talc mines that provided talc that was incorporated into Johnson and Johnson talc products, Chanel talc products, and numerous other brands of talc products. Because he has not reviewed similar evidence of the representativeness of the Vermont talc samples, he will not offer any opinions on that issue.” (Id. at p. 9.)</p> <p>“As described above, the Italian talc samples Dr. Compton tested that form the basis of his report²⁶ were obtained from Italy by Alan Segrave, a geologist hired by Imerys²⁷ and also retained by Chanel in this case. Defendants’ attorneys criticize Dr. Compton for extrapolating from the findings based on these samples to the mine as a whole, both in terms of its presentday and historical composition. Yet that is exactly what Mr. Segrave, in his report to Imerys’ attorneys, concluded. Segrave described the ‘current mining activity of the Fontane deposit as a homogenous talc horizon’ and, moreover, concluded that ‘the talc deposit is homogenous throughout for past-mined horizons having similar carbonate purity.’” (Id.)</p>	
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		<p>“Mr. Segrave’s testimony in a recent deposition makes perfectly clear that the samples he collected (in which Dr. Compton found asbestos, and Mr. Segrave reported none) are representative of all Italian talc ever produced from that mine[.]” (Id. at p. 10.)</p> <p>“Accordingly, Dr. Compton’s opinion regarding the asbestos content of the Italian talc mines are based on his own analysis of samples from that mine that, in the stated opinion of Imerys’ and Chanel’s own retained expert Alan Segarve, are representative of current and historical talc mining. Dr. Compton does not profess to have undertaken any geological analysis of the mine to determine the representativeness of the samples. To the extent that Defendants’ attorneys want to impeach the opinion of their own retained witness Alan Segrave, they certainly are free to do so. But under Evidence Code Sec. 801, the stated opinion of Mr. Segrave is “of a type that reasonably may be relied upon by an expert in forming an opinion upon the subject to which his testimony relates,” and Dr. Compton is certainly justified in relying on aspects of the study commissioned and paid for by Imerys. Dr. Compton’s testimony should be allowed.” (Id. at pp. 10-11.)</p> <p>Chanel: “In addition to similar methodological criticisms raised by Defendants Imerys and Johnson and Johnson, Chanel also urges exclusion of Dr. Compton’s Italian talc opinions because he testified in deposition that “1) he had not conducted any testing on a Chanel product attendant to this case; 2) he did not know the source of talc incorporated into Chanel No. 5; and 3) he had no opinion as to whether Chanel No. 5 has ever been contaminated with asbestos.”³⁰ Plaintiffs will not elicit any opinions from Dr. Compton that contradict his deposition testimony, but will ask Dr. Compton hypothetical questions based on the evidence in this case. Specifically, after Dr. Compton was deposed, Chanel’s corporate representative Amy Wyatt confirmed in her deposition that Chanel No. 5 body powder used Italian talc until 2010.” (Id. at p. 11.)</p>	
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No.	What to Exclude	Arguments	Ruling
28	Opinions and testimony by Plaintiffs' expert Dr. James Webber.	<p>Defendants contend:</p> <p>The Court should exclude Dr. James Webber and his report because he appeared for one day of deposition, the deposition did not finish, and Plaintiffs failed to offer him for another day of deposition before the expert discovery closed. (See Motion, p. 1; see also id. at pp. 2-4.)</p> <p>Dr. Webber intends to testify that, in the 1970s, the cosmetics industry "confounded" the FDA's attempt to "develop a sensitive and reliable method for detecting asbestos in talc[.]" (Id.) His opinion and testimony "about the actions and motivations of the cosmetics industry . . . are not a proper subject for expert testimony." (Id. at p. 1; see also id. at pp. 4-6.)</p> <p>The Court also should exclude Dr. Webber because he is unqualified to testify about the FDA's interactions with the cosmetics industry in the 1970s. (See id. at pp. 2, 7-8.)</p> <p>Plaintiffs contend:</p> <p>"Imerys has argued, and intends to argue to the jury, that the FDA has given its talc some seal of approval based on testing of their products and lack of required warnings. However, what Imerys failed to disclose is the genesis of the method used and the cosmetic talc industry's efforts in thwarting development of a sensitive and reliable method. Dr. James Webber – an environmental health scientist, regulator, and microscopist with decades of experience developing methods for the detection of asbestos in materials - is qualified as an expert to provide the jury</p>	<p>Denied:</p> <p>Defendants' argument – Dr. Webber should be excluded because he failed to finish his deposition – should be resolved by the time of trial. In his expert report, Dr. Webber opines that the talc industry "obstruct[ed]" the FDA's efforts to develop an asbestos-detection method for talc. (Id. at Ex. B, p. 13.) Defendants argue this is an "[im]proper subject for expert testimony[.]" citing federal district court rulings from New York, Florida, Minnesota, and Pennsylvania. (Motion, p. 1.)</p> <p>"Expert opinion testimony is 'helpful' (and, therefore, 'permissible') where the subject matter is sufficiently beyond the scope of common experience to be of assistance to the trier of fact." (Wegner et al., Cal. Practice Guide: Civil Trials and Evidence (The Rutter Group 2018) ¶ 8:701.)</p>

	<p>an opinion regarding the development of the methods used for detection of asbestos in talc and the cosmetic talc industry's role in confounded regulatory agency efforts as such information is well beyond the common experience of the jury.” (Opposition, p. 2.)</p> <p>All parties had the opportunity to depose Dr. Webber: “Dr. Webber has already given two depositions in this case, with a third day of deposition scheduled for June 11. The first day of his deposition took place on April 6, 2018, with questioning by counsel for Johnson & Johnson. His second day of deposition occurred on May 25, 2018, when he was further questioned by Johnson & Johnson and also by counsel for Imerys. Between these two depositions, Dr. Webber underwent surgery for a complete knee replacement and was medically unavailable to testify.¹ Notably, Johnson & Johnson and Imerys both stipulated that their questioning of Dr. Webber was complete as of May 25, 2018, barring any need for follow-up based on testimony elicited by counsel for Chanel in the final session of his deposition.² Accordingly, as all parties will have had the opportunity to depose Dr. Webber regarding his opinions in this matter and in light of Dr. Webber’s medical treatment between deposition sessions, Dr. Webber should not be precluded from testifying based on the incompleteness of his deposition.” (Id. at pp. 2-3.)</p> <p>Dr. Webber is qualified: “Plaintiffs’ expert, Dr. James Webber is an environmental health scientist specializing in the measurement and analysis of materials, determining the constituent ingredients in materials, and characterizing those materials and ingredients from a laboratory and public health perspective.³ Dr. Webber’s expertise spans over 40 years and includes asbestos research, asbestos analysis, certification of laboratories for asbestos testing and analysis, environmental chemistry, standards and regulation development, aerosol research, and trace metal analysis. (See</p>	<p>“The jury need not be wholly ignorant of the subject matter of the opinion ... if that were the test, little expert opinion testimony would ever be heard. Instead, the statute declares that <i>even if the jury has some knowledge</i> of the matter, expert opinion may be admitted whenever it would ‘assist’ the jury.” (Id. [emphasis in original].) This is a liberal standard. “Expert opinion testimony is excluded ‘only when it would add <i>nothing at all</i> to the jury’s common fund of information.” (Id. at ¶ 8:728 [emphasis in original].)</p> <p>As to this specific opinion, the Court grants the motion. It is an argumentative viewpoint of an advocate based upon historical events. Dr. Webber may be a helpful witness in authenticating certain historical events. He may even be a witness to some of them. The argument regarding the import of the events is better left to the lawyers.</p>
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		<p>Exhibit A at 1-4.) Dr. Webber has expertise in the analysis of various substances, including asbestos and talc, through the use of various analytical methodologies and equipment including x-ray diffraction (XRD), polarized light microscopy (PLM) phase contrast microscopy (PCM) and transmission electron microscopy (TEM) with selected area electron diffraction (SAED) and Electron Dispersive Spectroscopy (EDS). (Id.) He has conducted analysis for asbestos (measurement, identification, quantification) in thousands of samples of various products and materials in the public and private sector, and trained other technicians to do so as well. (Id.) Dr. Webber received his Ph.D. from the School of Public Health at the State University of New York at Albany in 1999 based on his dissertation A Paleolimnological Reconstruction of Airborne Asbestos Concentrations in the Fibrous-Talc Region of St. Lawrence County, New York, from 1872 to 1998, relating to asbestos in talc and exposure in the environment as a result.⁴” (Id. at pp. 3-4.)</p> <p>“Johnson and Johnson asserts that Dr. Webber is not qualified to offer an opinion regarding the development of "a sensitive and reliable method for detection of asbestos in talc" by the Food & Drug Administration (FDA) (Motion at 4.) What Defendants’ fails to note is that Dr. Webber has spent vast majority of his career - 33 years - in the regulatory sphere developing methods for the detection of asbestos in products and materials, water, soil, and air. At the New York State Department of Health, Dr. Webber worked directly with federal regulatory agencies, including the Environmental Protection Agency, in developing methods for detection of asbestos[.]” (Id. at p. 4.) “Indeed, as part of the methods development work Dr. Webber did as a regulator, he specifically developed programs to test the efficacy of these methods, the very same methods being considered by the FDA in</p>	
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		<p>the 1970's⁶ , upon which he offers an opinion in this case[.]” (Id. at p. 5.)</p> <p>“Dr. Webber has been qualified as an expert regarding asbestos in talc, methods for detection of asbestos in talc, and industry's role in shaping and confounding those methods in our California courts as well as in New Jersey⁸ and New York⁹ . This case is no different and Defendants’ has failed to show otherwise. Last year, Dr. Webber offered the same opinion Defendants’ now seek to preclude in the Polakow matter before the Honorable H. Chester Horn,¹⁰ the Depoian matter before the Honorable Charles F. Palmer¹¹, and the Blount matter before the Honorable Randolph Rhoades¹².” (Id. at p. 7.)</p> <p>Dr. Webber’s opinions concerning the cosmetic industry’s efforts to “confound” the FDA are a proper subject of expert testimony: “[E]ven if, as Defendants’ argues, the jurors are able to read the same industry documents and published methods as Dr. Webber, certainly the intricate details and implications of each analytical method, their development, significance of the cosmetic talc industry's involvement in their development, and the consequences are well beyond "the common knowledge that men of ordinary education could reach a conclusion as intelligently" as Dr. Webber. The Polakow, Depoian, and Blount courts agreed that Dr. Webber's specific opinion Defendants’ seek to exclude is "sufficiently beyond common experience” and “would assist the trier of fact” (See Exhibits D, I, J & K). Johnson and Johnson offers only nonbinding opinions from out-of-state courts to support its assertion that our courts require something other than exclusion only when an expert’s opinion “would add nothing at all to the jury’s common fund of information.” (McDonald (1984) 37 Cal.3d at 367).” (Id. at p. 10; see also id. at pp. 11-14.)</p>	
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No.	What to Exclude	Arguments	Ruling
29	Opinions and testimony by Plaintiffs' expert Dr. John Maddox.	<p>Defendants contend:</p> <p>Dr. John Maddox intends to testify that the Johnson & Johnson and Chanel products used by Ms. Weirick caused her injuries. (See Motion, p. 1.) Dr. Maddox's opinions should be excluded because he relied on Dr. Longo's and Dr. Compton's flawed testing results. Particularly, Dr. Maddox relied on Dr. Longo's and Dr. Compton's unsupported conclusions that all or most talc from the source mines, as well as the finished products Ms. Weirick used, contained asbestos. (See Motion, pp. 1, 4-10.)</p> <p>Additionally, Dr. Maddox's opinions ignore the universe of other testing results conducted by universities, government agencies, Defendants, and independent labs. (See <i>id.</i> at p. 10.)</p> <p>Plaintiffs contend:</p> <p>"Defendants falsely assert that Dr. Maddox only relied on the works of Dr. Longo and Dr. Compton for his opinion. This is simply not the case. In his deposition, Dr. Maddox clearly details some of the materials he relies on for his opinion that consumer talcum powders, such as those manufactured by Johnson and Johnson and Chanel, are routinely contaminated with asbestos." (Opposition, p. 3.) "At the start, Dr. Maddox provided a list of reliance articles that support his various opinions." (<i>Id.</i>) "The list is 55 pages, and contains approximately 30 articles are listed in the "Talc" section. Defendants' assertion that Dr. Maddox solely relies on the works of Dr. Longo and Dr. Compton is disingenuous and without support. Dr. Maddox outlines in his reference list all of the articles on which he relies." (<i>Id.</i> at p. 4.) "Furthermore, when asked about specific foundation for Dr. Maddox's opinions</p>	<p>Denied without prejudice:</p> <p>Dr. Maddox is a pathologist. Defendants seek to exclude him because he relied on Dr. Longo's and Dr. Compton's "flawed testing" and the "inappropriate extrapolations made by Plaintiffs' counsel from the binomial table created by Plaintiffs' statistician, Dr. Lynne Stokes." (Motion, p. 1.)</p> <p>Defendants concede Dr. Maddox is qualified to "tell the jury that [] Ms. Weirick has developed mesothelioma." (<i>Id.</i>) But they claim he is unqualified to say whether the relevant Johnson & Johnson and Chanel products contained asbestos. They contend Dr. Longo's and Dr. Compton's reports fail to provide Dr. Maddox sufficient foundation to discuss the "frequency with which [Ms. Weirick's] containers were contaminated, the level of contamination, or that her exposures to these products was a substantial</p>

	<p>regarding asbestos content of Johnson and Johnson products and Chanel products, Dr. Maddox cites not just to the work of Dr. Longo and Dr. Compton, but also testing found in defendants' own records, performed by their own consultants, the RJ Lee group[.]” (Id.) “Furthermore, later in his deposition, Dr. Maddox recalled an additional basis for his opinion that Johnson’s baby powder had asbestos, the articles by Dr. Blount, an employee of Johnson and Johnson, who published an article regarding asbestos content of Johnson and Johnson products[.]” (Id. at p. 5.) “Finally, Dr. Maddox specifically cites to the paper by Millette, Fitzgerald and Gordon paper of 2014[.]” (Id. at p. 6.) “Thus, Dr. Maddox relies on a wide variety of materials as foundation for his opinions in this case, including published scientific and medical literature, corporate documents, testing of source ore, and testing of finished products at issue, all of which are the type of documents upon which an occupational medicine physician may reasonably rely. Dr. Maddox’s opinions flow in a reasoned chain of logic from these materials, using appropriate, published methodology.” (Id.)</p> <p>“The issues raised by Defendants in their Motion fall squarely within the realm of vigorous cross-examination, not a 402 hearing. They go to the weight and credibility of evidence (matters for the jury’s consideration), rather than admissibility or sufficiency.” (Id. at p. 7.) “Specifically, the argument that Dr. Maddox’s reliance on the works of Dr. Compton and Dr. Longo cannot be excluded simply because Defendant’s have criticisms of certain aspects of them. There is no justification or legal basis to exclude Dr. Maddox’s reliance of these studies. Medical experts routinely rely on their testing and the scientific work of others as evidence of what does and does not contain asbestos. Dr. Maddox certainly does not have expertise himself to conduct such testing. As such, it is not at all unusual or out of the norm for a Medical expert to rely on testing of others who have the expertise to undertake such</p>	<p>factor in causing her disease.” (Id.)</p> <p>The Court’s rulings exclude some, but not all, of the evidence upon which Dr. Maddox relies. If Dr. Maddox continues to hold the same opinion based on evidence that has not been excluded, then The Trial Court, in its discretion, can decide whether a 402 hearing is necessary regarding whether Dr. Maddox has sufficient independent foundation for his opinion.</p>
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	testing, to help inform their opinions in the present case.” (Id.) “‘As manufacturers of asbestos-containing talcum powders, Defendants predictably take issue with expert testimony and opinions regarding the contamination of their talc with asbestos. Defendants’ challenge to Dr. Maddox’s opinions is the proper subject of vigorous cross-examination, governed by Evidence Code sections 761, 767, 773 and 780, and not an evidentiary hearing under Evidence Code section 402.” (Id.)	
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No.	What to Exclude	Arguments	Ruling
30	Opinions and testimony by Plaintiffs’ expert Dr. Jacqueline Moline.	<p>Defendants contend:</p> <p>“Dr. Moline intends to tell the jury that plaintiff Carolyn Weirick (“Ms. Weirick”) was exposed to asbestos through her use of Johnson’s Baby Powder and Shower to Shower talcum powder (“Johnson’s talcum powder products”), and that this exposure was a substantial factor in causing her mesothelioma. However, Dr. Moline admitted that she does not know how much asbestos, if any, Ms. Weirick was allegedly exposed to from her use of Johnson’s Baby Powder or Shower to Shower. Thus, Dr. Moline’s causation opinion is wholly without basis and should be excluded.” (Motion, p. 1.)</p> <p>“Defendants anticipate that Dr. Moline may also attempt to tell the jury about the ~50 other plaintiffs in other asbestos litigation who she has concluded developed mesothelioma from exposure to cosmetic talc. Defendants have no information regarding these other plaintiffs, their medical and exposure histories, or their lawsuits (including their allegations of asbestos exposure). Such testimony is not only irrelevant but is highly prejudicial to Defendants and will only result in undue consumption of time and juror confusion.” (Id.; see also id. at pp. 3-4.)</p>	<p>Granted in part. Otherwise denied without prejudice:</p> <p>Defendants contend Dr. Moline should be excluded because she failed to quantify the dose Ms. Weirick inhaled.</p> <p>Plaintiff cites to <i>Davis v. Honeywell</i> (2012) 245 Cal. App.4th 477, which holds that the “every exposure” theory is a jury question. Such testimony may be admissible, but Dr. Moline cannot go further in arguing that Plaintiff was exposed to a specific quantifiable dose unless she has a basis for doing so. Apparently she does not.</p> <p>As with Motion in Limine 29</p>

		<p>Dr. Moline’s opinions lack foundation: “Dr. Moline agrees that asbestos-related mesothelioma is a dose-response disease. (Deposition of Dr. Moline (“Moline Dep.”), attached as Exhibit A to Stewart Decl., at 39:15-22.) According to Dr. Moline, only “nontrivial exposures to asbestos” should be considered a substantial factor in the development of mesothelioma. (Id. at 39:23-40:11, 44:22-45:11.) Dr. Moline explained that a “nontrivial exposure” is an exposure “orders of magnitude above background that are associated with increased risk of developing disease.” (Id. at 40:12-18.)” (Id. at pp. 1-2.)</p> <p>“Accordingly, by Dr. Moline’s own standard, Ms. Weirick would have to be exposed to a “nontrivial” level of asbestos “orders of magnitude above background” from her use of Johnson’s talcum powder products in order for Dr. Moline to consider the Johnson’s talcum powder products a substantial factor in the development of her mesothelioma. Yet, Dr. Moline admitted at deposition: [1] She has not done a dose calculation to determine how much asbestos Ms. Weirick may have been exposed to through her use of Johnson’s talcum powder products (id. at 224:21-225:5; 229:11-25.); [2] She has not calculated a cumulative asbestos fiber dose for Ms. Weirick from her use of Johnson’s talcum powder products (id. at 230:7-10); and [3] She has not done a quantitative analysis with respect to the amount of asbestos she believes Ms. Weirick may have been exposed to through her use of Johnson’s talcum powder products (id. at 227:23-228:4; 229:11-25.)” (Id. at pp. 1-2.)</p> <p>“Dr. Moline clearly has no idea how much asbestos, if any, Ms. Weirick was exposed to from her use of Johnson’s talcum powder products. Thus, Dr. Moline has absolutely no basis— let alone a reasonable one— on which to opine that Ms. Weirick was exposed to a “nontrivial” amount of asbestos “orders of magnitude above</p>	<p>Plaintiffs and Dr. Moline must verify that she is able to testify to a reasonable degree of scientific certainty without reliance upon the evidence excluded by this Court. Plaintiffs state that there is enough evidence to establish exposure to asbestos through use of the product. The trial court can decide whether that is so.</p> <p>Dr. Molina’s testimony about asbestos fibers appears to be the subject of the same debate that is occurring between other expert witnesses. The Court is not prepared to take sides by excluding Plaintiffs’ evidence at this point.</p> <p>Dr. Molina’s testimony about the specifics of other asbestos cases is excluded.</p>
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		<p>background” from her use of Johnson’s talcum powder products. Dr. Moline likewise has zero basis on which to opine Ms. Weirick’s use of Johnson’s talcum powder products was a substantial factor in the development of her mesothelioma. Dr. Moline’s causation opinion is entirely lacking in foundation and purely speculative. Dr. Moline’s causation opinion is guesswork—not science. Accordingly, Dr. Moline’s causation opinion must be excluded pursuant to the standards set forth in Sargon.” (Id. at p. 2.)</p> <p>“In addition, Dr. Moline should not be allowed to rely on the binomial spreadsheet prepared by Plaintiffs’ statistical expert, Dr. Stokes, to opine about the probability of Ms. Weirick’s exposure. (Exh. A to Stewart Decl. (Moline Dep.), at 227:23-230:25.) Dr. Moline is not an expert in statistics. (Id. at 141:11-13.) All she did was review an affidavit of Dr. Stokes’ opinions. She never spoke to Dr. Stokes nor did she ever review Dr. Stokes’ deposition testimony. (Id. at 198:16-199:23.) She is also unqualified to conduct her own statistical probability analyses. (Id. at 141:11-13.) She should, therefore, be precluded from offering any opinion about the probability of Ms. Weirick being exposed to asbestos-contaminated talcum powder or the statistics underlying such an analysis.” (Id. at pp. 2-3.)</p> <p>Chanel contends:</p> <p>“Plaintiffs allege that Plaintiff Carolyn Weirick (“Weirick”) was diagnosed with mesothelioma, a cancer in the lining of her lung, after having allegedly breathed asbestos fibers through her use and general presence around talcum powder products allegedly contaminated with asbestos. As against Chanel, Plaintiffs allege that Chanel No. 5 After Bath Powder (“Chanel No. 5) has, at some point, been contaminated with asbestos, and that Weirick’s mother</p>	
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		<p>occasionally applied Chanel No. 5 in Weirick's presence, thereby potentially exposing Weirick to asbestos fibers." (Chanel Motion, p. 1.)</p> <p>"Dr. Moline is an Occupational Medicine Specialist, retained by Plaintiffs to offer opinions in this matter. It is anticipated the Dr. Moline will be offered at trial to opine that 1) Weirick's presence around her mother while she applied Chanel No. 5 resulted in exposure to asbestos, such that it was a substantial factor in causing Weirick's mesothelioma; 2) asbestos fibers shorter than 5 microns in length can be carcinogenic; and 3) nonasbestiform fibers can cause mesothelioma. However, Dr. Moline's opinions on these subjects are lacking in foundation and should be excluded:</p> <ul style="list-style-type: none"> • "Dr. Moline is not aware of any testing conducting on Chanel talcum powderproducts, does not know who supplied talc to Chanel, or which mines the talc in Chanel No. 5 was sourced from (other than through a representation made by Plaintiffs' counsel that Chanel used Italian talc). • "Dr. Moline's belief that asbestos fibers shorter than 5 microns in length can be carcinogenic is not a generally accepted opinion in the medical or scientific community and is based on a study merely identifying asbestos fibers in the pleura; importantly, the presence of asbestos fibers only identify exposure to asbestos – which everyone experiences through background levels of asbestos – not causation. • "The basis for Dr. Moline's opinion as to nonasbestiform fibers potentially causing mesothelioma is irrelevant, unsubstantiated, and unreliable." (Id. at pp. 1-2.) <p>Plaintiffs contend:</p>	
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		<p>“Defendant’s move to preclude Dr. Moline from opining that Mrs. Weirick’s exposure to Johnson’s Baby Powder, Shower to Shower and Chanel No. 5 After Bath Powder caused or contributed to her disease. At the outset it must be brought to the Court’s attention that Dr. Moline’s opinions regarding these issues have never been excluded or limited by any Court to Plaintiffs’ knowledge. She has testified for many years, across the country, and despite having motions such as the ones filed here, filed in many cases, they have not, to plaintiffs’ knowledge been granted. If Dr. Moline’s opinions had been excluded in the past Defendants would have attached said orders to their motions. Notably Dr. Moline testified in several recent cases involving Johnson’s Baby Powder exposure including the Stephen Lanzo case in New Jersey, the Joanne Anderson case here in Los Angeles, and in the Ilene Brick case here in Los Angeles. Dr. Moline’s opinions in this case are not new or novel, or unusual in any way, but are consistent is testimony that has been admitted all over the country for many years.” (Opposition, p. 2.)</p> <p>“Specifically addressing Defendants’ motions, talc-containing Johnson’s Baby Powder and Shower to Shower powder contains asbestos and has for decades. Chanel has also sold asbestos-containing Chanel No. 5 After Bath Powder for decades. The evidence to be presented at this trial, in the form of expert testimony, historical testing results, internal Johnson & Johnson documents, testing of ore sources, and corporate representative testimony, will overwhelmingly establish the fact that Johnson’s Baby Powder, Shower to Shower, and Chanel No. 5 After Bath Powder contained asbestos for decades.” (Id.)</p> <p>“In light of the clear evidence of asbestos content in Defendants’ products, Dr. Moline holds the opinion that Mrs. Weirick’s decades-long use of Johnson & Johnson baby powder and Shower</p>	
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		<p>to Shower exposed her to significant amounts of asbestos and substantially contributed to cause her mesothelioma. Dr. Moline also holds the opinion that Mrs. Weirick's mother's use of Chanel No. 5 After Bath Powder, also caused Mrs. Weirick be exposed to significant amounts of asbestos and substantially contributed to cause her mesothelioma." (Id.)</p> <p>Dr. Moline relied on reliable materials – Dr. Longo's report, Dr. Compton's report, Dr. Stokes's statistical analysis, Dr. Alice Blount's work, corporate documents, historical tests, etc. (See id. at pp. 4-10.)</p> <p>Dr. Molines is not required to identify a numerical dose of exposure: "Defendants seem to be arguing that Dr. Moline has testified that in order to reach a causation opinion she must first (a) perform a dose calculation to determine how much asbestos Ms. Weirick may have been exposed to (b) calculate a cumulative asbestos fiber dose for Mrs. Weirick for her use of Johnson's talcum products, and finally (c) a quantitative analysis with respect to the amount of asbestos she believes Mrs. Weirick may have been exposed to through her use of Johnson's talcum powder products. No case, and no testimony by Dr. Moline, supports this conclusion. In fact, the court in Davis v. Honeywell, 245 Cal. App. 4th 477 (2012), held that California law does not require any quantification of dose in order to establish causation in a mesothelioma case." (Id. at p. 10.)</p> <p>Dr. Moline should be allowed to testify about other mesothelioma plaintiffs: "The issues raised by Defendants in their Motion fall squarely within the realm of vigorous cross-examination, not a 402 hearing. They go to the weight and credibility of evidence (matters for the jury's consideration), rather than admissibility or sufficiency." (Id. at p. 13.) "Specifically, the argument that Dr.</p>	
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		<p>Moline's examination of ~50 other people diagnosed with mesothelioma for which talcum powder was a cause cannot be excluded simply because those individuals had legal cases. There is no justification for such a position; no legal basis to exclude this information that Dr. Moline properly relies upon to help inform her opinion in this case. Medical experts routinely rely on their experience and training when giving testimony in front of a jury. It is not at all unusual or out of the norm for a Medical expert to rely on other patients or cases they have seen and evaluated (whether in litigation or not) to help inform their opinions in the present case. As a manufacturer asbestos-containing talcum powder, the Defendants predictably take issue with expert testimony and opinions regarding the contamination of their talc with asbestos. Defendants' challenge to Dr. Moline's opinions is the proper subject of vigorous cross-examination, governed by Evidence Code sections 761, 767, 773 and 780, and not an evidentiary hearing under Evidence Code section 402." (Id.)</p> <p>Dr. Moline has foundation to opine concerning the asbestos content of Chanel No. 5 After Bath Powder. (See id. at pp. 13-16.)</p> <p>Dr. Moline should be allowed to testify regarding asbestos fibers shorter than five microns and the distinction between asbestiform and non-asbestiform. (See id. at pp. 16-19.)</p>	
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Exhibit 86

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

IN RE: JOHNSON & JOHNSON
TALCUM POWDER PRODUCTS
MARKETING SALES
PRACTICES, AND PRODUCTS
LIABILITY LITIGATION } MDL NO.16-2738 (FLW) (LHG)

VIDEO-RECORDED DEPOSITION OF
MARK W. RIGLER, PH.D.

February 6, 2019
9:14 a.m.

11340 Lakefield Drive
Suite 200
Johns Creek, Georgia

Frances Buono, RPR, CCR-B-791

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(Reporter disclosure made pursuant to
 Article 10.B. of the Rules and Regulations of
 the Board of Court Reporting of the Judicial
 Council of Georgia.)
 (Identification statement by
 videographer.)

MARK W. RIGLER, PH.D.,

having been first duly sworn, was examined and
 testified as follows:

EXAMINATION

BY MR. CHACHKES:

Q. Good morning, Dr. Rigler.

A. Good morning.

Q. How are you?

A. Good; you?

Q. Good.

MR. CHACHKES: So just for the record, I
 have the same late production objections as
 yesterday and the same request to keep the
 deposition open. I assume you have the same?

MS. O'DELL: We have the same opposition.

Q. (By Mr. Chachkes) Okay. So what I've
 done is I've brought some exhibits from yesterday, so
 if you're wondering why there's stamps on them, it's
 because they're the stamps from Dr. Longo's

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INDEX TO EXHIBITS

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Exhibit Description Page

1 Invoices 204
 2 Excerpt - Trial transcript, 136
 3 February 20, 2018, Vol. XIV, Lanzo
 4 vs. Cyprus Amax
 5 MAS TEM Coefficient of Variation for 173
 6 Tremolite and Anthophyllite in Talc,
 7 A Quality Control Study, 9-6-18
 8 Graph 177
 9

(Original Exhibits 1 through 4 have been
 attached to the original transcript.)

- - -

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1 deposition. We are going to use some of the same
 2 exhibits, if that's okay.

A. Yes.

Q. So what's been marked yesterday -- so all
 the stamps are February 5, 2019, Longo. And I'm
 going to use those exhibits unless I use a new
 exhibit.

A. Okay.

Q. So I'm just going to hand you what's been
 marked yesterday as Exhibit 2. And you recognize
 that as the January 15 version of the report that you
 cosigned?

A. Yes.

Q. Okay. And what was your involvement in
 drafting this report?

A. I reviewed the report, looked over the
 data, and made typographical and grammatical
 corrections throughout the report.

Q. Okay. Do you feel qualified to testify to
 every matter that's in that report?

MS. O'DELL: Object to the form.

THE WITNESS: As I say, I am qualified to
 testify on what's in this report now, yes.

Q. (By Mr. Chachkes) Okay. So if Dr. Longo
 were to, for example, not show up at a trial, you

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09:16:20 1 could testify to everything that you could testify
 09:16:21 2 to?
 09:16:22 3 A. Well, I'm not Dr. Longo, of course.
 09:16:26 4 However, I can testify as to what's in this report,
 09:16:29 5 yes.
 09:16:29 6 Q. Okay. To what degree is Dr. Longo more
 09:16:33 7 qualified about something in that report than you?
 09:16:36 8 A. Dr. Longo has a degree in materials
 09:16:39 9 science, and my degree is in microbiology, my Ph.D.
 09:16:44 10 So he has more experience in the materials area, so I
 09:16:53 11 would, you know, defer to him on those topics.
 09:16:57 12 Q. Okay. Well, there's no microbiology in
 09:17:01 13 the report; right?
 09:17:02 14 A. Not that I know of, no. But there are
 09:17:04 15 microscopic things in the report, and that's one of
 09:17:07 16 my areas of qualification, electron microscopy and
 09:17:12 17 the microscopic world, if you will.
 09:17:14 18 Q. So that's sort of a comparison of your
 09:17:16 19 relative expertise. What about your relative ability
 09:17:19 20 to talk about substantive matters, data, you know,
 09:17:23 21 what analysts did? Is there any difference there
 09:17:26 22 between you and Dr. Longo?
 09:17:27 23 A. Well, Dr. Longo is the head of the
 09:17:31 24 laboratory, so I would defer to him on a number of
 09:17:35 25 those areas, and specific areas.
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 09:17:38 1 Q. Okay. For example?
 09:17:39 2 A. Well, for example, there may be some
 09:17:42 3 situations where he directed the study and that
 09:17:49 4 would -- I would defer those things to him.
 09:17:51 5 Q. Did you direct any of the studies in that
 09:17:54 6 report?
 09:17:54 7 A. As far as me directing the studies in
 09:17:57 8 here, that was mainly Dr. Longo.
 09:17:58 9 Q. Okay. What studies in there did you
 09:18:02 10 direct?
 09:18:03 11 A. Again, they were mainly directed by
 09:18:06 12 Dr. Longo.
 09:18:06 13 Q. You say mainly. I'm just wondering is
 09:18:09 14 there anything left over that you directed?
 09:18:11 15 MS. O'DELL: Object to the form.
 09:18:12 16 THE WITNESS: In terms of the study
 09:18:16 17 process, originally we conferred on it in the
 09:18:20 18 very beginning, but Dr. Longo was the one who
 09:18:24 19 mainly carried out the processes and direction
 09:18:28 20 of the studies.
 09:18:29 21 Q. (By Mr. Chachkes) Okay. So the
 09:18:31 22 conceptualization of the experimental procedures you
 09:18:35 23 participated, but in the actual execution you did not
 09:18:38 24 participate?
 09:18:39 25 MS. O'DELL: Object to the form.
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09:18:40 1 THE WITNESS: Well, in terms of looking at
 09:18:42 2 data, quality control issues, that type of
 09:18:45 3 thing, which would be part of the study, I would
 09:18:47 4 say, yes, I was part of that.
 09:18:49 5 Q. (By Mr. Chachkes) Okay. So the actual
 09:18:51 6 experimentation process, the -- people call it wet
 09:18:54 7 work; are you familiar with that?
 09:18:55 8 A. Yes.
 09:18:56 9 Q. Okay. So the actual experimental process
 09:18:58 10 and the wet work, you did not participate in that?
 09:19:01 11 A. Again, Dr. Longo directed those activities
 09:19:06 12 in this study; and again, I will defer those things
 09:19:10 13 to him, you know, if -- once we get to those topics
 09:19:14 14 and we talk about those topics, because right now
 09:19:17 15 we're talking about things in general.
 09:19:18 16 Q. I'm not asking about Dr. Longo. I'm
 09:19:20 17 asking about you.
 09:19:20 18 A. Sure.
 09:19:21 19 Q. What in the report -- which experiments
 09:19:23 20 did you participate in, if any?
 09:19:24 21 A. I told you in the beginning what I did
 09:19:28 22 here, which was mainly review the data, review the
 09:19:31 23 report for typographical or grammatical errors, also
 09:19:36 24 checking data, that type of thing.
 09:19:38 25 Q. So can you confirm you did not participate
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 09:19:41 1 in the actual experimenting that's reported on in the
 09:19:44 2 exhibit?
 09:19:44 3 MS. O'DELL: Object to the form.
 09:19:47 4 THE WITNESS: Again, I was part of the
 09:19:48 5 study working on part of the study, so I
 09:19:50 6 consider myself as someone who participated in
 09:19:53 7 the study.
 09:19:53 8 Q. (By Mr. Chachkes) Okay. So --
 09:19:55 9 A. That's the way it works in the laboratory.
 09:19:57 10 Q. Let's be more specific.
 09:19:58 11 A. Sure.
 09:19:59 12 Q. So you understand what an experiment is;
 09:20:04 13 right?
 09:20:04 14 MS. O'DELL: In what context?
 09:20:07 15 THE WITNESS: Yeah, in what context?
 09:20:08 16 Q. (By Mr. Chachkes) Okay. So you're
 09:20:09 17 unclear on what an experiment is?
 09:20:11 18 A. No, I'm not unclear on what an experiment
 09:20:13 19 is. I'm wondering what you're asking as far as your
 09:20:15 20 question.
 09:20:15 21 Q. What does the word experiment mean to you?
 09:20:17 22 A. Well, it would be a set of tests after
 09:20:21 23 coming up with a hypothesis about a particular
 09:20:23 24 situation what the questions are.
 09:20:25 25 Q. Let's use your definition. Were you
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09:20:26 **1** involved in any experiments where you were actually
 09:20:29 **2** testing -- testing -- J&J bottles of talc?
 09:20:35 **3** **A.** I was not -- I was not handling and
 09:20:39 **4** testing the talc myself. Our analysts in the
 09:20:42 **5** laboratory were directed to do that.
 09:20:44 **6** **Q.** Did you ever use a PLM for the purposes of
 09:20:48 **7** this report?
 09:20:49 **8** **A.** No, I did not.
 09:20:50 **9** **Q.** Did you ever use a TEM for the purposes of
 09:20:52 **10** this report?
 09:20:53 **11** **A.** Not for the purposes of this report.
 09:20:55 **12** **Q.** Did you ever use an XRD device for the
 09:20:59 **13** purposes of this report?
 09:21:01 **14** **A.** We do not have the XRD device or that type
 09:21:04 **15** of device at our laboratory.
 09:21:06 **16** **Q.** Did you ever do an SAED experiment for the
 09:21:08 **17** purposes of this report?
 09:21:10 **18** **A.** Again, same answer as with the TEM.
 09:21:13 **19** **Q.** So that's a no?
 09:21:15 **20** **A.** Correct.
 09:21:16 **21** **Q.** Okay. And did you ever do EDXA work
 09:21:21 **22** experiments on J&J bottles of talc for this report?
 09:21:24 **23** **A.** That would be the same answer.
 09:21:26 **24** **Q.** Which is a no?
 09:21:26 **25** **A.** Yes.

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09:22:48 **1** done, you had the data?
 09:22:49 **2** **A.** Well, then I would review the data, go
 09:22:54 **3** through the data, and then see again if it met the QC
 09:22:59 **4** qualifications.
 09:23:01 **5** **Q.** Okay. Anything else that you did once the
 09:23:03 **6** data was done?
 09:23:04 **7** **A.** Not that I can recall as I sit here.
 09:23:09 **8** **Q.** Okay. During any of the experiments did
 09:23:13 **9** you sit over the shoulder of any analyst and watch
 09:23:17 **10** the work they were doing?
 09:23:18 **11** **A.** Yeah. I'm at the laboratory mostly on a
 09:23:23 **12** daily basis, so I was able to go in and look and see
 09:23:25 **13** what analysts were doing at any particular time.
 09:23:28 **14** **Q.** Okay. Were you substantively contributing
 09:23:33 **15** at those moments when you were looking at what
 09:23:35 **16** analysts were doing?
 09:23:36 **17** **A.** What do you mean by that?
 09:23:37 **18** **Q.** Well, were you telling them to change
 09:23:41 **19** their behavior or to do something that they weren't
 09:23:43 **20** otherwise going to do? Anything that affected their
 09:23:46 **21** experimental work?
 09:23:47 **22** **MS. O'DELL:** Object to the form.
 09:23:48 **23** **THE WITNESS:** No. No.
 09:23:48 **24** **Q.** (By Mr. Chachkes) And so you're an
 09:23:52 **25** employee of MAS?

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 09:21:27 **1** **Q.** And did you -- let's -- so once the
 09:21:36 **2** experiments were done and you saw the data, did you
 09:21:39 **3** do any substantive contribution to the report other
 09:21:46 **4** than correct typos?
 09:21:47 **5** **MS. O'DELL:** Object to the form.
 09:21:48 **6** **THE WITNESS:** In terms of looking at what
 09:21:50 **7** was done during the study and working with the
 09:21:55 **8** TEM manager on the study and the quality
 09:21:59 **9** control, yes.
 09:22:00 **10** **Q.** (By Mr. Chachkes) Okay. So can you be
 09:22:02 **11** more specific? So you did quality control. What's
 09:22:04 **12** that?
 09:22:04 **13** **A.** Well, I monitored the reporting that was
 09:22:08 **14** done in terms of what samples were analyzed, what
 09:22:12 **15** replicates, duplicates, and blanks that would be
 09:22:16 **16** tested in terms of what were necessary for us to meet
 09:22:20 **17** the QC standards.
 09:22:22 **18** **Q.** Okay. And who set the QC standards?
 09:22:25 **19** **A.** Well, the QC standards are set by NVLAP
 09:22:30 **20** NIST, the National Institutes of Standard and
 09:22:34 **21** Technology, for TEM labs that are analyzing for
 09:22:36 **22** asbestos.
 09:22:36 **23** **Q.** Other than ensure that folks complied with
 09:22:42 **24** the QC standards, what did you do?
 09:22:46 **25** So let's say after the experiments were

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 09:23:53 **1** **A.** Yes.
 09:23:53 **2** **Q.** How long have you been an employee there?
 09:23:55 **3** **A.** Over 30 years.
 09:23:57 **4** **Q.** Let's go back to the report. Are there
 09:24:04 **5** any sections of the report that you can say you
 09:24:06 **6** didn't work on?
 09:24:08 **7** **MS. O'DELL:** Object to the form.
 09:24:09 **8** **THE WITNESS:** I would have to look. If
 09:24:14 **9** you're talking about the reports in front of me
 09:24:16 **10** here --
 09:24:17 **11** **Q.** (By Mr. Chachkes) Yes, the January 15
 09:24:19 **12** expert report for the MDL.
 09:24:20 **13** **A.** The J3 portions of the report.
 09:24:24 **14** **Q.** And you would say you had some involvement
 09:24:26 **15** in all other portions?
 09:24:28 **16** **A.** In other portions, yes.
 09:24:29 **17** **Q.** How much time did you devote to the work
 09:24:32 **18** underlying this report and the report itself?
 09:24:34 **19** **A.** I didn't keep track of it. I have no
 09:24:39 **20** idea.
 09:24:39 **21** **Q.** Over 10 hours?
 09:24:41 **22** **A.** Probably over 10 hours.
 09:24:42 **23** **Q.** Over 20 hours?
 09:24:43 **24** **A.** Again, that would be a guesstimate. I
 09:24:45 **25** don't know beyond that.

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09:24:47 **1** Q. More than 15 hours?
 09:24:48 **2** A. I don't know.
 09:24:49 **3** Q. So probably over 10 hours, but you don't
 09:24:52 **4** know beyond that?
 09:24:52 **5** A. Correct.
 09:24:53 **6** Q. Okay. And were you involved in the
 09:24:58 **7** creation of the protocols to test J&J talc in this
 09:25:03 **8** case?
 09:25:04 **9** A. In terms of the protocols for the testing,
 09:25:09 **10** we used standard methods throughout for the analysis.
 09:25:14 **11** Dr. Longo essentially put together the way the test
 09:25:18 **12** or the study was going to be done, but we, you know,
 09:25:21 **13** overall use the standard methods throughout.
 09:25:23 **14** Q. When you say Dr. Longo put together the
 09:25:26 **15** way -- you said the way the studies would be
 09:25:28 **16** conducted?
 09:25:29 **17** A. Yes.
 09:25:29 **18** Q. Was that something in writing?
 09:25:31 **19** A. Well, he directs the study on a daily
 09:25:35 **20** basis.
 09:25:35 **21** Q. The question is was it in writing?
 09:25:38 **22** A. Was it in writing? I don't know. You'd
 09:25:42 **23** have to ask Dr. Longo.
 09:25:43 **24** Q. Okay. So you're unaware of whether he
 09:25:46 **25** communicated with the analysts about protocol in
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09:25:48 **1** writing?
 09:25:49 **2** A. Well, the --
 09:25:50 **3** MS. O'DELL: Object to form.
 09:25:51 **4** THE WITNESS: -- laboratory has protocol
 09:25:52 **5** for the way that talc is analyzed and
 09:25:59 **6** asbestos-bearing products are analyzed, so we
 09:26:01 **7** have written protocol for those things.
 09:26:03 **8** MR. CHACHKES: Okay. And I think I've
 09:26:06 **9** requested that those be produced. I don't think
 09:26:07 **10** those have been produced.
 09:26:09 **11** MS. O'DELL: I think it's reflected in his
 09:26:11 **12** report, but we will consider your request.
 09:26:13 **13** Q. (By Mr. Chachkes) Okay. Do you
 09:26:21 **14** communicate with the analysts by email at all?
 09:26:23 **15** A. Communicate with the analysts by email?
 09:26:26 **16** No. I can go speak to them.
 09:26:29 **17** Q. Okay. There's no sort of like weekly
 09:26:33 **18** email or monthly email where you summarize what's
 09:26:36 **19** going on?
 09:26:37 **20** A. No.
 09:26:37 **21** Q. Did you ever change an analyst's
 09:26:42 **22** determinations where an analyst came up with some
 09:26:44 **23** conclusion and you said maybe that's not right, go
 09:26:46 **24** back?
 09:26:47 **25** A. No.
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09:26:49 **1** Q. Do you consider yourself an expert in TEM
 09:26:56 **2** analysis?
 09:26:56 **3** A. Well, the term expert, I think, you
 09:27:00 **4** probably have to defer that to the court. I mean, I
 09:27:04 **5** have more than the layperson's knowledge so -- but I
 09:27:08 **6** would defer that to the court.
 09:27:10 **7** Q. Okay. Have you --
 09:27:13 **8** A. I mean, I've been qualified as an expert
 09:27:16 **9** before, but in this case...
 09:27:19 **10** Q. When is the first time you ever used a
 09:27:21 **11** TEM?
 09:27:21 **12** A. The first time I used a TEM? Let's see.
 09:27:24 **13** That would probably have been sometime in the early
 09:27:29 **14** '80s, I would say, yeah.
 09:27:31 **15** Q. How many times have you used an SAED to
 09:27:35 **16** characterize a particle?
 09:27:36 **17** A. SAED?
 09:27:37 **18** Q. SAED.
 09:27:39 **19** A. I don't know if I could count the number
 09:27:40 **20** of times.
 09:27:41 **21** Q. How many times have you used EDXA to
 09:27:45 **22** characterize a particle?
 09:27:47 **23** A. Same answer on that. Yes.
 09:27:48 **24** Q. What about PLM, do you consider yourself
 09:27:53 **25** an expert on PLM?
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09:27:54 **1** A. I am not a PLM microscopist.
 09:27:56 **2** Q. Okay. What was your contribution to the
 09:27:58 **3** PLM aspects of the January 15 report?
 09:28:03 **4** A. Well, as far as PLM contributions, again,
 09:28:07 **5** I'm not the PLM analyst, so we just wanted to be sure
 09:28:13 **6** that the quality program was being followed in the
 09:28:18 **7** laboratory.
 09:28:18 **8** Q. When you say that a quality program was
 09:28:21 **9** being followed, is that the same contribution you
 09:28:31 **10** made to the other portions of the report?
 09:28:33 **11** MS. O'DELL: Object to form.
 09:28:34 **12** THE WITNESS: Yes. Well, I would say yes
 09:28:35 **13** to that. Yes.
 09:28:36 **14** Q. (By Mr. Chachkes) Okay. Did you ever
 09:28:43 **15** personally test a talc sample for asbestos
 09:28:45 **16** contamination?
 09:28:46 **17** A. Did I ever personally test them?
 09:28:48 **18** Q. Yes.
 09:28:48 **19** A. Not that I can recall as I sit here.
 09:28:50 **20** Q. Okay.
 09:28:55 **21** A. We've done tissue testing for talc and
 09:29:00 **22** asbestos in tissue, yes.
 09:29:01 **23** Q. But just testing talcum powder that came
 09:29:05 **24** out of a bottle, you've never done that?
 09:29:07 **25** A. I've not personally tested that.
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09:29:09 **1** Q. You have an undergraduate degree in
 09:29:21 **2** biology?
 09:29:21 **3** A. Yes.
 09:29:21 **4** Q. And a Ph.D. in microbiology?
 09:29:24 **5** A. Yes.
 09:29:24 **6** Q. Did you take any geology courses at any
 09:29:27 **7** point in your education?
 09:29:27 **8** A. No, but at the University of Georgia one
 09:29:31 **9** of my very good friends in graduate school was a
 09:29:34 **10** geologist, and we discussed a lot of issues
 09:29:38 **11** surrounding the phyllosilicates. He was a kaolin
 09:29:44 **12** person. He was a clay person.
 09:29:44 **13** In Georgia we have a lot of red clay, and
 09:29:46 **14** so that was one of his areas that he enjoyed, and I
 09:29:51 **15** learned quite a bit from him. Very strong geology
 09:29:56 **16** department at the University of Georgia.
 09:29:57 **17** Q. Other than talking to a friend about
 09:29:59 **18** geology, do you have any formal geology education?
 09:30:03 **19** MS. O'DELL: Object to form.
 09:30:04 **20** THE WITNESS: No.
 09:30:04 **21** Q. (By Mr. Chachkes) Did you take any
 09:30:06 **22** mineralogy courses during any part of your
 09:30:07 **23** educations?
 09:30:07 **24** A. It's interesting because in the electron
 09:30:11 **25** microscopy courses that you take, the substances that
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 09:30:17 **1** we analyzed, you know, varied from biological
 09:30:20 **2** substances to mineralogical substances. So you would
 09:30:24 **3** get a portion of that with that training, and I got
 09:30:27 **4** some of that.
 09:30:28 **5** Q. Okay. Have you ever physically analyzed a
 09:30:33 **6** mineral under a microscopy technique?
 09:30:36 **7** A. I, again, think the answer to that is I
 09:30:41 **8** have sat with the analysts, that includes the PLM
 09:30:46 **9** analysts, watched them do the work, and participated
 09:30:51 **10** that way in terms of the -- that kind of an analysis.
 09:30:55 **11** Q. Other than watching other people analyze
 09:30:57 **12** minerals under microscopy techniques, have you any
 09:31:01 **13** experience analyzing minerals under microscopy
 09:31:03 **14** techniques?
 09:31:03 **15** A. Well, by electron microscopy in terms of
 09:31:09 **16** seeing these minerals and having run into them during
 09:31:13 **17** an analysis. And again, I've been doing electron
 09:31:17 **18** microscopy since the '80s, so the tissue analysis
 09:31:21 **19** that I've done in the past we've come across, you
 09:31:26 **20** know, mineral types and there's tissues and how to
 09:31:28 **21** analyze those. So I've done that in tissue samples
 09:31:32 **22** at the optical or the bulk PLM level very limited,
 09:31:37 **23** say.
 09:31:37 **24** Q. Okay. Have you ever personally run a
 09:31:39 **25** microscopy analysis of minerals that aren't in
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09:31:44 **1** tissue?
 09:31:45 **2** A. Yes.
 09:31:48 **3** Q. Can you explain?
 09:31:49 **4** A. Again, at MAS I've had a variety of roles
 09:31:55 **5** from the early '90s when I was hired there; and MAS
 09:32:02 **6** is a materials characterization laboratory, so I
 09:32:06 **7** worked on hundreds of different kinds of projects
 09:32:09 **8** using microscopy and gas chromatography, all kinds of
 09:32:15 **9** chemical techniques.
 09:32:16 **10** So I have run into situations where I've
 09:32:18 **11** examined minerals that have been in materials such as
 09:32:22 **12** plastics or polymers, for instance, where we have
 09:32:25 **13** done cutting or thin sectioning of that kind of
 09:32:29 **14** material, and you would look at the inclusions in the
 09:32:32 **15** polymers because they are -- they're additives, they
 09:32:36 **16** may be for a variety of different reasons, and then
 09:32:39 **17** you end up analyzing them or seeing them. And this
 09:32:43 **18** was mostly by SEM or TEM.
 09:32:46 **19** Q. And you personally did those experiments?
 09:32:48 **20** A. Yes, I've personally done those things.
 09:32:50 **21** Q. Have you ever personally done a microscopy
 09:32:52 **22** investigation of a mineral or a solid solution that's
 09:32:56 **23** just mineral or solid solution?
 09:32:59 **24** A. Can you explain a bit more?
 09:33:01 **25** Q. Do you know what a solid solution is?
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 09:33:03 **1** A. Yes.
 09:33:03 **2** Q. So, for example, a bottle of talc just
 09:33:06 **3** contains minerals; right?
 09:33:08 **4** A. Yes.
 09:33:08 **5** Q. Okay. So have you ever --
 09:33:09 **6** MS. O'DELL: Object to the form.
 09:33:10 **7** Q. (By Mr. Chachkes) -- personally done a
 09:33:12 **8** microscopy analysis of something that just contains
 09:33:15 **9** minerals, doesn't contain anything else like plastics
 09:33:18 **10** or other things?
 09:33:19 **11** A. Well, I think if you look at it from the
 09:33:23 **12** viewpoint of if you have a plastic or whatever it may
 09:33:29 **13** be and a mineral inclusion in there, you're looking
 09:33:31 **14** at the mineral, you know, aside from the other
 09:33:33 **15** polymeric material that's there. So the answer to
 09:33:36 **16** that is yes. And as far as a solid solution series
 09:33:39 **17** mineral, yes.
 09:33:40 **18** Q. Okay. I want to be clear what you're
 09:33:42 **19** answering because you've talked about plastics, and
 09:33:44 **20** my question was saying expressly exclude those. So
 09:33:47 **21** let me ask it again just to make sure I have a clear
 09:33:50 **22** answer.
 09:33:50 **23** A. All right.
 09:33:50 **24** Q. Have you ever personally done a microscopy
 09:33:53 **25** analysis of minerals and only minerals, where it's
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09:33:57 **1** just minerals you're looking at?
 09:33:58 **2 A.** The answer to that is yes.
 09:34:00 **3 Q.** Okay. Can you give me an example?
 09:34:02 **4 A.** Again, I will go back to studies that
 09:34:06 **5** we've done on client samples over the years, most of
 09:34:10 **6** them being particulate types of samples. In the
 09:34:13 **7** early days when I came to MAS, we were looking at a
 09:34:16 **8** lot of asbestos-bearing materials. So part of my
 09:34:21 **9** training at the company was looking at those
 09:34:24 **10** materials by SEM or TEM.
 09:34:26 **11 Q.** Okay. So those asbestos-bearing materials
 09:34:28 **12** were only minerals, the -- you say asbestos-bearing,
 09:34:32 **13** but the thing that was bearing them was minerals?
 09:34:34 **14 A.** Yeah. I mean, if you're looking at
 09:34:36 **15** something like vermiculite, you know, pure -- yeah.
 09:34:39 **16 Q.** Got it. Did you take any crystallography
 09:34:43 **17** courses during your education?
 09:34:44 **18 A.** Once again, that's part of the TEM
 09:34:47 **19** training that I got.
 09:34:48 **20 Q.** Okay. Was the TEM training you got, that
 09:34:50 **21** was, I'm sorry, in college?
 09:34:52 **22 A.** Yeah, in graduate school.
 09:34:53 **23 Q.** Graduate school. Was that a particular
 09:34:55 **24** course, or was that just part of your thesis work?
 09:34:58 **25 A.** No, that's a course. They had courses in
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09:35:01 **1** scanning electron microscopy and transmission
 09:35:04 **2** electron microscopy, and those were all part of the
 09:35:06 **3** course that you took. You had to learn about
 09:35:11 **4** electron optics; you had to learn about how electrons
 09:35:14 **5** interact with materials. So that would all be part
 09:35:18 **6** of my training.
 09:35:19 **7 Q.** Okay. You're not a geologist?
 09:35:21 **8 A.** That's correct.
 09:35:22 **9 Q.** You're not a mineralogist?
 09:35:24 **10 A.** No.
 09:35:24 **11 Q.** Okay. You're not a crystallographer?
 09:35:28 **12 A.** Well, I know crystallography. But as far
 09:35:31 **13** as being a, quote, crystallographer, if there is such
 09:35:35 **14** a person that just specializes in that, the answer is
 09:35:37 **15** no.
 09:35:37 **16 Q.** You're not a certified industrial
 09:35:39 **17** hygienist?
 09:35:39 **18 A.** Correct.
 09:35:39 **19 Q.** You have done exposure assessments;
 09:35:42 **20** correct?
 09:35:42 **21 A.** Yes.
 09:35:42 **22 Q.** Okay. Have you done exposure studies?
 09:35:46 **23 A.** The answer to that is I have been involved
 09:35:49 **24** in exposure studies, yes.
 09:35:51 **25 Q.** Okay. You're not a pathologist?
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09:35:56 **1 A.** No, I'm not a medical doctor.
 09:35:57 **2 Q.** Okay. You don't have any medical
 09:35:59 **3** training?
 09:36:00 **4 A.** Well, the medical training I have is
 09:36:03 **5** related to my training as a -- in undergraduate as a
 09:36:09 **6** biologist. The curriculum that I took at Villanova
 09:36:15 **7** was for premed, and that included courses that
 09:36:18 **8** doctors would take prior to medical school, things
 09:36:21 **9** like histotechnique, which is the study of how you
 09:36:26 **10** prepare tissues, how to prepare and section those
 09:36:29 **11** tissues. Also, you know, you would -- I took
 09:36:33 **12** comparative anatomy. I taught anatomy at Emory
 09:36:38 **13** University for a semester down here in Atlanta.
 09:36:42 **14** So I have training in a number of areas
 09:36:45 **15** that doctors would have, all the way from neurology
 09:36:49 **16** to pathology, that type of thing.
 09:36:50 **17 Q.** You're not a statistician?
 09:36:52 **18 A.** No. But we use statistics in our work.
 09:36:55 **19 Q.** Okay. You're not a geostatistician?
 09:36:58 **20 A.** No.
 09:36:58 **21 Q.** Have you ever created a method for
 09:37:10 **22** microscopy investigation that has been published in a
 09:37:15 **23** peer-reviewed publication?
 09:37:15 **24 A.** Yes.
 09:37:16 **25 Q.** Can you give me an example?
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09:37:18 **1 A.** I would say we did a study a number of
 09:37:24 **2** years ago on the famous Kent Micronite filter. It
 09:37:31 **3** was a blue filter that was with -- made by Lorillard
 09:37:36 **4** and they put that on cigarettes to essentially be a
 09:37:40 **5** filtration device. So that was one that I did.
 09:37:44 **6 Q.** Okay.
 09:37:45 **7 A.** And that was published.
 09:37:46 **8 Q.** Okay. And that was a methodology for
 09:37:48 **9** investigating the subject matter?
 09:37:50 **10 A.** Yes.
 09:37:50 **11 Q.** Okay. What about methodologies for
 09:37:57 **12** looking for asbestos in talc?
 09:38:03 **13 A.** As far as methodologies for looking for
 09:38:05 **14** asbestos in talc, the answer to that is yes.
 09:38:07 **15 Q.** Okay. So you've published in the
 09:38:08 **16** peer-reviewed --
 09:38:09 **17 A.** Oh, I'm sorry, published. No. Not yet.
 09:38:11 **18 Q.** Okay. Are you working on something?
 09:38:13 **19 A.** Well, I can't confirm or deny that right
 09:38:16 **20** now.
 09:38:16 **21 Q.** Well, it's a deposition. You have to.
 09:38:18 **22 A.** Well, I can --
 09:38:19 **23 Q.** Are you working on something right now?
 09:38:21 **24 A.** Our experience with publications is that
 09:38:26 **25** we don't talk about those things because in the past
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09:38:30 **1** we were working on a publication and somehow, some
 09:38:35 **2** way, some attorney groups got hold of it, and they
 09:38:39 **3** influenced the editor on that document. So we don't
 09:38:43 **4** talk about those things anymore.
 09:38:45 **5** **Q.** Okay. So pending question is: Are you
 09:38:48 **6** working on a publication about finding talc in
 09:38:52 **7** asbestos, and you are refusing to answer?
 09:38:54 **8** **MS. O'DELL:** Object to the form.
 09:38:55 **9** **THE WITNESS:** No.
 09:38:55 **10** **MS. O'DELL:** That's not what he said.
 09:38:56 **11** **Q.** (By Mr. Chachkes) Okay. So are you
 09:38:57 **12** working on a publication about finding talc in
 09:38:59 **13** asbestos?
 09:39:00 **14** **A.** No.
 09:39:00 **15** **MS. O'DELL:** Object to the form.
 09:39:01 **16** **Q.** (By Mr. Chachkes) I'm sorry. Are you
 09:39:02 **17** working on a publication about finding asbestos in
 09:39:04 **18** talc?
 09:39:04 **19** **MS. O'DELL:** Object to the form.
 09:39:05 **20** **THE WITNESS:** I answered the question
 09:39:07 **21** twice.
 09:39:07 **22** **Q.** (By Mr. Chachkes) The answer is yes?
 09:39:09 **23** **A.** I just answered the question twice. I
 09:39:11 **24** said no.
 09:39:11 **25** **Q.** Okay. All right. Are you working on any
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09:39:18 **1** publications about talc that you hope to get into the
 09:39:20 **2** peer-reviewed literature?
 09:39:21 **3** **MS. O'DELL:** Object to the form.
 09:39:22 **4** **THE WITNESS:** I've already answered that
 09:39:25 **5** question before, and I can neither confirm nor
 09:39:31 **6** deny that right now.
 09:39:31 **7** **Q.** (By Mr. Chachkes) Okay. I'll give you
 09:39:32 **8** one more chance. If you would answer the question
 09:39:35 **9** are you working on any publications about talc that
 09:39:37 **10** you intend to put in the peer-reviewed literature,
 09:39:39 **11** and you're refusing to answer?
 09:39:40 **12** **A.** No, I'm not --
 09:39:41 **13** **MS. O'DELL:** Object to the form.
 09:39:43 **14** **THE WITNESS:** I'm not refusing to answer.
 09:39:45 **15** I've already answered.
 09:39:45 **16** **Q.** (By Mr. Chachkes) Your answer is you can
 09:39:47 **17** neither confirm nor deny?
 09:39:49 **18** **A.** Correct.
 09:39:50 **19** **Q.** And that's different from a refusal to
 09:39:51 **20** answer?
 09:39:51 **21** **MS. O'DELL:** Yes.
 09:39:52 **22** **THE WITNESS:** No, that's an answer.
 09:39:53 **23** **MR. CHACHKES:** Okay. And so, Counsel,
 09:39:54 **24** that's your position, you're going to not allow
 09:39:54 **25** that question?

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09:39:55 **1** **MS. O'DELL:** The question was asked, and
 09:39:57 **2** the witness answered it.
 09:39:58 **3** **MR. CHACHKES:** Okay.
 09:40:00 **4** **MR. SILVER:** Please note that Imerys will
 09:40:00 **5** be --
 09:40:07 **6** **THE REPORTER:** I'm sorry, I can't hear
 09:40:07 **7** you.
 09:40:07 **8** **MR SILVER:** Imerys will be calling the
 09:40:07 **9** Special Master at the break to have the witness
 09:40:09 **10** compelled to answer the question, but we will
 09:40:13 **11** wait for a break now.
 09:40:14 **12** **Q.** (By Mr. Chachkes) Okay. Has any
 09:40:15 **13** governmental body asked you to test talc?
 09:40:19 **14** **A.** Not that I know of, no.
 09:40:20 **15** **Q.** Has any School of Public Health asked you
 09:40:22 **16** to test talc?
 09:40:23 **17** **A.** School of Public Health, no.
 09:40:25 **18** **Q.** Have you ever taught any courses to train
 09:40:27 **19** microscopists?
 09:40:30 **20** **A.** The answer to that is yes, I've been part
 09:40:33 **21** of some seminars for training.
 09:40:38 **22** **Q.** What seminars?
 09:40:42 **23** **A.** A number of years ago at the American
 09:40:46 **24** Industrial Hygiene Conference there was a session on
 09:40:48 **25** electron microscopy of asbestos-bearing materials and
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09:40:52 **1** I had a session in that.
 09:40:53 **2** **Q.** And you taught microscopy techniques to
 09:40:57 **3** the participants?
 09:40:57 **4** **A.** Yes.
 09:40:58 **5** **Q.** Have you ever attended a McCrone training
 09:41:05 **6** or testing class?
 09:41:06 **7** **A.** The answer to that is yes.
 09:41:07 **8** **Q.** Can you tell me when?
 09:41:08 **9** **A.** The one that I -- wait a minute. Let me
 09:41:11 **10** see if that was McCrone. I think that was -- that
 09:41:17 **11** was a different group for training for mold spore
 09:41:21 **12** analysis.
 09:41:22 **13** **Q.** Okay. So you've tested -- you've tested a
 09:41:24 **14** McCrone class for mold spore analysis?
 09:41:27 **15** **A.** No. It was another group.
 09:41:28 **16** **Q.** Okay. Have you ever attended a McCrone
 09:41:31 **17** testing or training class?
 09:41:32 **18** **A.** Yes.
 09:41:32 **19** **Q.** For asbestos?
 09:41:33 **20** **A.** No. The one that we had, I believe at our
 09:41:37 **21** laboratory, we had them come in. Again, it was for
 09:41:39 **22** mold analysis, mold spore analysis.
 09:41:42 **23** **Q.** Any other McCrone testing or training
 09:41:44 **24** class that you have attended?
 09:41:46 **25** **A.** Not that I can recall as I sit here.

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09:41:48 **1** Q. Okay. Were you consulted by the FDA in
 09:41:53 **2** their recent testing of talc?
 09:41:54 **3** A. No.
 09:41:55 **4** Q. Have you been consulted by any foreign
 09:41:59 **5** bodies about testing of talc?
 09:42:01 **6** MS. O'DELL: Object to the form.
 09:42:02 **7** Q. (By Mr. Chachkes) Foreign countries?
 09:42:04 **8** A. No.
 09:42:05 **9** Q. Has any third-party consulted with you
 09:42:14 **10** about the testing of talc that isn't someone who's
 09:42:17 **11** paying you?
 09:42:18 **12** MS. O'DELL: Object to the form.
 09:42:21 **13** THE WITNESS: Ask the question again.
 09:42:22 **14** Q. (By Mr. Chachkes) Has any third-party --
 09:42:23 **15** has anybody asked you at MAS to consult about testing
 09:42:26 **16** of talc that isn't paying you?
 09:42:28 **17** MS. O'DELL: Object to the form.
 09:42:29 **18** THE WITNESS: Not that I know of. You
 09:42:31 **19** would have to ask Dr. Longo about that.
 09:42:33 **20** Q. (By Mr. Chachkes) Is all the talc testing
 09:42:36 **21** that you've been involved with been done at the
 09:42:38 **22** request of plaintiffs' lawyers who pay you?
 09:42:40 **23** A. I have no idea who all of the folks are
 09:42:43 **24** that have asked us to test talc. You would, again,
 09:42:46 **25** have to ask Dr. Longo.
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09:42:47 **1** Q. You just don't know where the money comes
 09:42:49 **2** from for your work?
 09:42:50 **3** MS. O'DELL: Object to the form.
 09:42:51 **4** THE WITNESS: No.
 09:42:51 **5** Q. (By Mr. Chachkes) Have you ever testified
 09:42:54 **6** in a federal court about testing talc? A federal
 09:42:57 **7** court.
 09:42:57 **8** A. I don't think so.
 09:42:59 **9** Q. Has any federal court ever said your work
 09:43:01 **10** or your methodology has passed Daubert or standards
 09:43:04 **11** for scientific rigor?
 09:43:06 **12** A. I want to say yes to that.
 09:43:08 **13** Q. And why do you want to say yes to that?
 09:43:09 **14** A. Because I believe they have, but I would
 09:43:11 **15** have to check the record.
 09:43:12 **16** Q. What about has any federal court ever said
 09:43:14 **17** your methodology or your work regarding to talc
 09:43:19 **18** analysis has passed Daubert standards for scientific
 09:43:22 **19** rigor?
 09:43:23 **20** MS. O'DELL: Object to the form.
 09:43:24 **21** THE WITNESS: That I don't believe has
 09:43:25 **22** been done.
 09:43:27 **23** Q. (By Mr. Chachkes) How many publications
 09:43:29 **24** do you have in the peer-reviewed literature?
 09:43:31 **25** A. I hadn't counted them. They're on my CV.
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09:43:34 **1** You can count them.
 09:43:35 **2** Q. How many were not funded by MAS?
 09:43:42 **3** MS. O'DELL: Object to the form.
 09:43:43 **4** Q. (By Mr. Chachkes) If any?
 09:43:44 **5** A. Not funded by MAS?
 09:43:46 **6** Q. Yeah.
 09:43:47 **7** A. None of them were funded by MAS.
 09:43:49 **8** Q. Who were they funded by?
 09:43:51 **9** A. Again, most all of them were done as pure
 09:43:56 **10** research and the -- well, I guess if you're looking
 09:44:02 **11** at it as funded by, I don't know what you mean by
 09:44:04 **12** funded by MAS. But we essentially -- when you do a
 09:44:09 **13** research study, it's typically not funded by anybody.
 09:44:12 **14** Q. So this is -- were all your peer-reviewed
 09:44:17 **15** publications done based on work done at MAS?
 09:44:21 **16** A. Yes. Well, not all of them. I mean,
 09:44:25 **17** there were a lot of them I did at graduate school,
 09:44:27 **18** yes.
 09:44:27 **19** Q. So other than your graduate school
 09:44:29 **20** peer-reviewed publications where your -- are your
 09:44:33 **21** peer-reviewed publications from your work at MAS?
 09:44:35 **22** A. All of them? At this point I'd have to go
 09:44:41 **23** and look.
24 Q. Okay.
 09:44:41 **25** A. I can't recall.
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09:44:42 **1** Q. For those peer-reviewed works that you
 09:44:45 **2** published based on work done at MAS, the underlying
 09:44:49 **3** work at MAS was funded by someone; correct?
 09:44:53 **4** MS. O'DELL: Object to the form.
 09:44:54 **5** THE WITNESS: No, not necessarily. No.
 09:44:56 **6** We did work that wasn't funded by others that
 09:45:00 **7** were published.
 09:45:01 **8** Q. (By Mr. Chachkes) So you've done work at
 09:45:03 **9** MAS that was purely academic, not really funded by
 09:45:07 **10** anybody or for any purpose other than academics?
 09:45:09 **11** MS. O'DELL: Object to the form.
 09:45:10 **12** THE WITNESS: To my knowledge, yes.
 09:45:11 **13** Q. (By Mr. Chachkes) And how many of your
 09:45:13 **14** publications could qualify as that?
 09:45:15 **15** A. Again, I don't know, I would have to go
 09:45:19 **16** and look.
 09:45:19 **17** Q. Would you agree it's important to disclose
 09:45:23 **18** sources of funding for publications in peer-reviewed
 09:45:27 **19** literature?
 09:45:27 **20** A. Sure.
 09:45:27 **21** Q. Are there any publications you have that
 09:45:31 **22** were funded by plaintiffs' lawyer monies?
 09:45:34 **23** MS. O'DELL: Object to the form.
 09:45:36 **24** THE WITNESS: Again, I would have to go --
 09:45:37 **25** I would have to look.
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09:45:38 **1** Q. (By Mr. Chachkes) Okay.
 09:45:39 **2** A. Off the top of my head, I don't recall.
 09:45:41 **3** Q. But if it were, it would be important to
 09:45:43 **4** disclose that fact?
 09:45:44 **5** A. And it would be disclosed because the
 09:45:46 **6** publications, the editorial process requires that.
 09:45:49 **7** Q. And there's no publications in the
 09:45:53 **8** peer-reviewed literature regarding testing for
 09:45:57 **9** talc -- testing talc; right?
 09:46:00 **10** MS. O'DELL: Object to the form. Object
 09:46:01 **11** to the form.
 09:46:02 **12** THE WITNESS: Your question again, I'm
 09:46:03 **13** sorry?
 09:46:03 **14** Q. (By Mr. Chachkes) You don't have any
 09:46:04 **15** peer-reviewed publications regarding the testing of
 09:46:06 **16** talc; right?
 09:46:07 **17** A. I don't, no.
 09:46:07 **18** Q. What about peer-reviewed publications
 09:46:12 **19** regarding the testing of talc in ovarian tissue?
 09:46:14 **20** MS. O'DELL: Object to the form. Are you
 09:46:15 **21** talking about his publications or in --
 09:46:18 **22** MR. CHACHKES: Of course, yes.
 09:46:20 **23** MS. O'DELL: It's not clear on the
24 question.
25 THE WITNESS: Yeah.
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 09:46:20 **1** MS. O'DELL: So would you ask the question
 09:46:21 **2** again, please.
 09:46:21 **3** Q. (By Mr. Chachkes) Do you have any
 09:46:23 **4** publications in the peer-reviewed literature about
 09:46:23 **5** testing ovarian tissue for talc?
 09:46:26 **6** A. No.
 09:46:27 **7** Q. Do you have any publications in the
 09:46:30 **8** peer-reviewed literature about testing ovarian tissue
 09:46:35 **9** for asbestos?
 09:46:35 **10** A. No.
 09:46:38 **11** Q. Do you have any publications -- actually,
 09:46:45 **12** skip that.
 09:46:49 **13** Have you been a coauthor on all of
 09:46:51 **14** Dr. Longo's reports testing Johnson & Johnson talcum
 09:46:58 **15** powder products?
 09:46:58 **16** A. The answer to that is I don't know. A
 09:47:04 **17** number of them, yes.
 09:47:05 **18** Q. Okay. Are you aware of any report by
 09:47:08 **19** Dr. Longo where he issued an expert report in
 09:47:11 **20** litigation about testing Johnson Baby Powder and
 09:47:15 **21** didn't have you as a coauthor?
 09:47:17 **22** A. I don't recall as I sit here.
 09:47:19 **23** Q. 2017, what percentage of your time did you
 09:47:24 **24** spend working on talc-related litigation projects?
 09:47:27 **25** A. I always get that question. I have no
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09:47:30 **1** idea. I don't keep track of it.
 09:47:32 **2** Q. Over 50 percent?
 09:47:34 **3** A. Again, I don't know.
 09:47:35 **4** Q. It could be over 50 percent, but you don't
 09:47:38 **5** know?
 09:47:38 **6** MS. O'DELL: Object to the form.
 09:47:39 **7** THE WITNESS: I do not know. It could be
 09:47:40 **8** as little as 10 percent. It could be 5 percent.
 09:47:43 **9** I don't know.
 09:47:44 **10** Q. (By Mr. Chachkes) Could it be 50 percent?
 09:47:46 **11** A. No, I don't think so.
 09:47:47 **12** Q. 2018, what percentage of your time did you
 09:47:50 **13** spend working on talc-related litigation projects?
 09:47:53 **14** A. Same answer.
 09:47:54 **15** Q. What's the majority of your time spent on
 09:47:58 **16** at MAS?
 09:47:58 **17** A. At the laboratory?
 09:47:59 **18** Q. Just at MAS generally.
 09:48:01 **19** A. Oh, a variety of different things on a
 09:48:03 **20** daily basis.
 09:48:04 **21** Q. If you had to pick one thing that you
 09:48:07 **22** spend most of your time on, what's that?
 09:48:09 **23** A. Most of my time -- I would say most of my
 09:48:18 **24** time is spent on technological issues surrounding
 09:48:23 **25** analyses that we do.
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 09:48:24 **1** Q. Of what?
 09:48:25 **2** A. Of all kinds of materials.
 09:48:27 **3** Q. What material do you spend most of your
 09:48:30 **4** time on?
 09:48:31 **5** MS. O'DELL: Object to the form.
 09:48:32 **6** THE WITNESS: What material did I spend
 09:48:33 **7** most of my time on?
 09:48:34 **8** Q. (By Mr. Chachkes) Correct.
 09:48:35 **9** A. That would vary by the week.
 09:48:36 **10** Q. Okay.
 09:48:37 **11** A. Yeah.
 09:48:37 **12** Q. There are weeks where it's asbestos;
13 right?
 09:48:40 **14** A. There can be some that are, yes.
 09:48:42 **15** Q. Okay. What's another material that you
 09:48:44 **16** might have spent a majority of your time on that's
 09:48:48 **17** not asbestos?
 09:48:49 **18** MS. O'DELL: Object to the form.
 09:48:50 **19** THE WITNESS: Tissue.
 09:48:50 **20** Q. (By Mr. Chachkes) Tissue for looking at
 09:48:51 **21** whether it contains asbestos?
 09:48:52 **22** A. In some cases, yes.
 09:48:53 **23** Q. Okay. What are -- I mean, is there a
 09:48:57 **24** solid chunk of time, like really a significant chunk
 09:49:01 **25** of your time, let's say, over 5 percent of a year
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09:49:04 **1** where you're spending doing some scientific work that
 09:49:06 **2** has nothing to do with talc or asbestos?
 09:49:09 **3** **A.** Yes.
 09:49:09 **4** **Q.** Okay. What would that be?
 09:49:11 **5** **A.** Well, once again, technological issues
 09:49:17 **6** surrounding things at our laboratory. For instance,
 09:49:19 **7** as a chief science officer I get all kinds of
 09:49:22 **8** questions about what we're looking at as far as
 09:49:27 **9** instrumentation in our laboratory in order to do
 09:49:30 **10** certain kinds of analyses.
 09:49:34 **11** We have clients -- potential clients that
 09:49:38 **12** call in and they want to do an analysis on maybe a
 09:49:42 **13** drug of some kind, something like that.
 09:49:44 **14** So it would be up to me working with
 09:49:47 **15** another scientists there at the laboratory to
 09:49:50 **16** understand what resources we need to be able to do
 09:49:52 **17** that kind of test, whether we will do that kind of
 09:49:55 **18** test.
 09:49:55 **19** **Q.** Do you bill for your time working for
 09:50:01 **20** plaintiffs in talc cases?
 09:50:03 **21** **A.** Yes.
 09:50:03 **22** **Q.** Do you write down the hours?
 09:50:05 **23** **A.** I do keep some of the hours, yes.
 09:50:08 **24** **Q.** Okay. You say some? There's some times
 09:50:12 **25** you work for plaintiffs' lawyers and you don't charge
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09:50:14 **1** them?
 09:50:15 **2** **MS. O'DELL:** Object to the form.
 09:50:16 **3** **THE WITNESS:** Uh-huh. Yes.
 09:50:17 **4** **Q.** (By Mr. Chachkes) Why?
 09:50:18 **5** **A.** Because it just happens.
 09:50:19 **6** **Q.** But for the most part you bill for your
 09:50:21 **7** time?
 09:50:21 **8** **A.** Yes.
 09:50:21 **9** **Q.** And --
 09:50:23 **10** **A.** I don't bill for it. MAS bills for it.
 09:50:25 **11** Yes.
 09:50:26 **12** **Q.** Can you estimate how much time you spent
 09:50:29 **13** working on the MDL projects?
 09:50:30 **14** **A.** No. I think we already talked about that
 09:50:34 **15** earlier.
 09:50:35 **16** **Q.** Okay.
 09:50:35 **17** **A.** Yep.
 09:50:36 **18** **Q.** Do you have any estimate as to what
 09:50:44 **19** percentage of your time recently has been for
 09:50:46 **20** litigation-related projects as opposed to
 09:50:49 **21** nonlitigation-related projects?
 09:50:51 **22** **A.** No.
 09:50:51 **23** **Q.** Could it be 50 percent?
 09:50:53 **24** **MS. O'DELL:** Objection.
 09:50:54 **25** **THE WITNESS:** I have no idea.
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09:50:55 **1** **Q.** (By Mr. Chachkes) Okay. You testified in
 09:51:00 **2** your first talc case in the Ingham matter in Missouri
 09:51:03 **3** last year?
 09:51:04 **4** **A.** Yes.
 09:51:05 **5** **Q.** You testified regarding your tissue
 09:51:07 **6** analysis?
 09:51:07 **7** **A.** Yes.
 09:51:08 **8** **Q.** And you testified at trial about
 09:51:09 **9** extrapolating asbestos content from TEM testing;
 09:51:14 **10** correct?
 09:51:14 **11** **A.** Yes.
 09:51:14 **12** **Q.** Do you know how much money MAS has made in
 09:51:19 **13** asbestos litigation over the years?
 09:51:20 **14** **A.** I have no idea.
 09:51:21 **15** **Q.** Do you know how much money MAS has made
 09:51:24 **16** over -- for talc litigation over the years?
 09:51:26 **17** **A.** No.
 09:51:26 **18** **Q.** You have no involvement in that aspect
 09:51:29 **19** of --
 09:51:29 **20** **A.** I wouldn't know.
 09:51:33 **21** **Q.** To your knowledge, did MAS ever test
 09:51:37 **22** cosmetic talcum powder for asbestos before being
 09:51:40 **23** engaged by plaintiffs' lawyers for that kind of work?
 09:51:43 **24** **MS. O'DELL:** Object to the form.
 09:51:44 **25** **THE WITNESS:** The answer to that question
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09:51:45 **1** is probably.
 09:51:47 **2** **Q.** (By Mr. Chachkes) Why do you say
 09:51:48 **3** probably?
 09:51:48 **4** **A.** Because of the work that has been done
 09:51:54 **5** over the years. We did quite a bit of testing in the
 09:51:58 **6** past, I believe, on talc that was used in industrial
 09:52:09 **7** applications; but also the suppliers use the same
 09:52:13 **8** kind of talc in, for instance, cosmetics and drug
 09:52:19 **9** applications.
 09:52:19 **10** **Q.** So it's your testimony that talc
 09:52:22 **11** manufacturers use the same exact talc for industrial
 09:52:26 **12** purposes and cosmetic purposes?
 09:52:27 **13** **A.** No, that's not my testimony.
 09:52:29 **14** **MS. O'DELL:** Object to form.
 09:52:30 **15** **Q.** (By Mr. Chachkes) Did MAS ever -- I'm
 09:52:30 **16** going to focus on the word cosmetic here.
 09:52:32 **17** **A.** Okay.
 09:52:33 **18** **Q.** Did MAS ever test cosmetic talcum powder
 09:52:37 **19** for asbestos prior to being engaged to do that work
 09:52:38 **20** for plaintiffs' lawyers?
 09:52:39 **21** **MS. O'DELL:** Object to the form.
 09:52:40 **22** **THE WITNESS:** The answer to that again, as
 09:52:43 **23** I said before, is probably.
 09:52:45 **24** **Q.** (By Mr. Chachkes) Okay. So was it J&J
 09:52:49 **25** cosmetic talcum powder? Colgate cosmetic talcum
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09:52:53 **1** powder? What cosmetic talcum powder do you think
 09:52:58 **2** that was?
 09:52:58 **3** **A.** I don't know. I do know, again, that a
 09:53:00 **4** number of different types of talcum powders were
 09:53:03 **5** tested at MAS prior to this litigation.
 09:53:04 **6** **Q.** Well, you cited some industrial talcum
 09:53:14 **7** powder --
 09:53:14 **8** **A.** Yes. Well, I just used a --
 09:53:14 **9** THE REPORTER: Wait. One at a time.
 09:53:14 **10** THE WITNESS: Sorry. Ask the question
 09:53:16 **11** again.
 09:53:16 **12** **Q.** (By Mr. Chachkes) Okay. You have no
 09:53:18 **13** specific memory of testing any cosmetic talcum powder
 09:53:22 **14** prior to being engaged by plaintiff lawyers to do
 09:53:27 **15** this?
 09:53:27 **16** MS. O'DELL: Object to the form.
 09:53:28 **17** THE WITNESS: Again, now you've asked the
 09:53:32 **18** question differently than before. The answer
 09:53:36 **19** again is, as I said, MAS has been involved in
 09:53:40 **20** testing talcum powders in the past prior to this
 09:53:44 **21** litigation, and some of them most probably were
 09:53:49 **22** cosmetic types, too.
 09:53:50 **23** **Q.** (By Mr. Chachkes) When you say most
 09:53:52 **24** probably, did you have a personal involvement in
 09:53:53 **25** those testings?
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09:53:54 **1** **A.** Being at the laboratory and seeing samples
 09:54:01 **2** that have come in and had come in over that period of
 09:54:05 **3** time, again, the answer to that is probably.
 09:54:09 **4** **Q.** Okay. So but what about personally
 09:54:11 **5** involved in the experimentation on talc prior to
 09:54:14 **6** being engaged by plaintiff lawyers, were you
 09:54:17 **7** personally involved in any such investigations?
 09:54:20 **8** **A.** The answer to that is probably also.
 09:54:22 **9** **Q.** Okay. So you've run TEM on talcum powder
 09:54:26 **10** at MAS prior to being engaged by --
 09:54:29 **11** **A.** Well, when you say --
 09:54:31 **12** MS. O'DELL: Object to the form.
 09:54:33 **13** THE WITNESS: -- personally involved,
 09:54:36 **14** again, part of the work that I have done in the
 09:54:39 **15** past as a laboratory manager would be to be at
 09:54:41 **16** the location where the analyst is analyzing that
 09:54:45 **17** talc or that product and looking over their
 09:54:48 **18** shoulder and seeing what they're doing. So that
 09:54:50 **19** would be the personal involvement right there.
 09:54:58 **20** **Q.** (By Mr. Chachkes) Okay. Can you name any
 09:55:00 **21** cosmetic talcum powder that MAS looked at prior to
 09:55:03 **22** being engaged at -- engaged by plaintiff lawyers to
 09:55:06 **23** do that, to look at cosmetic talcum powder?
 09:55:08 **24** **A.** I can't recall that as I sit here.
 09:55:08 **25** **Q.** Okay. Do you believe MAS is the best lab
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09:55:12 **1** in the world to analyze talc for asbestos?
 09:55:15 **2** MS. O'DELL: Object to the form.
 09:55:16 **3** THE WITNESS: I like the way you put that.
 09:55:19 **4** Do like that.
 09:55:22 **5** I would say that, yes, we're one of the
 09:55:26 **6** best in the world, yes.
 09:55:26 **7** **Q.** (By Mr. Chachkes) Can you name some
 09:55:28 **8** others that are in your league?
 09:55:30 **9** MS. O'DELL: Object to the form.
 09:55:31 **10** THE WITNESS: Well, that again calls for a
 09:55:35 **11** judgment on these other laboratories. So, you
 09:55:42 **12** know, I respect the other laboratories that are
 09:55:44 **13** doing this work. But as far as best in the
 09:55:48 **14** world, I would put MAS right there.
 09:55:50 **15** **Q.** (By Mr. Chachkes) Okay. The question was
 09:55:51 **16** what other laboratories are up there?
 09:55:53 **17** **A.** I think Jim Millette's lab was -- is
 09:56:00 **18** definitely up there.
 09:56:02 **19** **Q.** What about McCrone?
 09:56:03 **20** **A.** Yes.
 09:56:04 **21** **Q.** Are there academic laboratories that can
 09:56:09 **22** analyze for asbestos in talc at the level you do?
 09:56:13 **23** **A.** Academic laboratories?
 09:56:14 **24** **Q.** Yes.
 09:56:15 **25** **A.** With the quality control we have? I can't
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09:56:20 **1** think of any.
 09:56:21 **2** **Q.** Okay. You do better analysis of
 09:56:23 **3** asbestos -- of talc for asbestos than academic
 09:56:26 **4** laboratories that focus on mineralogy exclusively?
 09:56:29 **5** MS. O'DELL: Object to the form.
 09:56:30 **6** THE WITNESS: When it comes to quality
 09:56:32 **7** control, yes.
 09:56:32 **8** **Q.** (By Mr. Chachkes) What about in terms of
 09:56:35 **9** accurate results?
 09:56:36 **10** **A.** Same. Same answer.
 09:56:37 **11** **Q.** Are MAS's analyses of talc for asbestos
 09:56:44 **12** reproducible by other labs?
 09:56:48 **13** MS. O'DELL: Object to the form.
 09:56:49 **14** THE WITNESS: Again, I don't know how to
 09:56:50 **15** answer that. But they should be if they use the
 09:56:54 **16** same technologies and techniques.
 09:56:57 **17** **Q.** (By Mr. Chachkes) Even though their
 09:56:58 **18** quality controls aren't up to your standards?
 09:57:01 **19** MS. O'DELL: Object to the form.
 09:57:02 **20** THE WITNESS: Oh, well, in that case the
 09:57:03 **21** answer is I couldn't tell you.
 09:57:04 **22** **Q.** (By Mr. Chachkes) Okay. So there's no
 09:57:05 **23** lab you can cite right now -- academic, professional,
 09:57:09 **24** industrial, or otherwise -- that can reproduce your
 09:57:13 **25** results with the same accuracy?
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09:57:14 **1** MS. O'DELL: Object to the form. That's
 09:57:15 **2** not his question.
 09:57:17 **3** Q. (By Mr. Chachkes) It's a question.
 09:57:18 **4** A. Ask it a different way.
 09:57:20 **5** Q. No.
 09:57:21 **6** Can you reread the question, please.
 09:57:31 **7** (The record was read by the reporter.)
 09:57:32 **8** MS. O'DELL: Object to the form.
 09:57:33 **9** THE WITNESS: Well, if they -- again, if
 09:57:34 **10** they use the same techniques, they should be
 09:57:38 **11** able to, sure.
 09:57:39 **12** Q. (By Mr. Chachkes) Okay. So anyone
 09:57:46 **13** following the ISO 22262 protocol should be able to
 09:57:50 **14** reproduce your results?
 09:57:51 **15** MS. O'DELL: Object to the form.
 09:57:53 **16** THE WITNESS: If they're following the
 09:57:54 **17** protocol, it's most likely that they could, yes.
 09:57:56 **18** Q. (By Mr. Chachkes) Okay. Has MAS received
 09:58:01 **19** any accolades from any academic institutions for its
 09:58:07 **20** testing of talc?
 09:58:07 **21** A. Academic institutions?
 09:58:09 **22** Q. Yes.
 09:58:09 **23** A. I have no idea.
 09:58:11 **24** Q. Has any renowned -- nationally or
 09:58:15 **25** internationally renowned TEM scientist identified MAS
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09:58:19 **1** as one of the best labs in the world for testing
 09:58:22 **2** talc?
 09:58:23 **3** MS. O'DELL: Object to the form.
 09:58:24 **4** THE WITNESS: Well, I think if you want to
 09:58:25 **5** talk about good laboratories in that kind of
 09:58:27 **6** testing, you would definitely look to NIST NVLAP
 09:58:33 **7** as the national standard for TEM laboratories
 09:58:36 **8** and testing. So, you know, they would -- you
 09:58:44 **9** know, based on their assessments, their audits
 09:58:47 **10** of our laboratory, then I would say yes.
 09:58:49 **11** Q. (By Mr. Chachkes) Okay. So NIST and
 09:58:51 **12** NVLAP have told MAS that you're one of the best labs
 09:58:55 **13** in the world for testing talc?
 09:58:57 **14** MS. O'DELL: Object to the form.
 09:58:58 **15** THE WITNESS: No, they don't say things
 09:58:59 **16** like that.
 09:58:59 **17** Q. (By Mr. Chachkes) Okay. They just
 09:59:00 **18** accredit you?
 09:59:00 **19** A. Yeah, of course. Yeah.
 09:59:02 **20** Q. They didn't give you some super
 09:59:04 **21** accreditation that only you get or you're above and
 09:59:07 **22** beyond other laboratories; correct?
 09:59:08 **23** A. No --
 09:59:08 **24** MS. O'DELL: Object to the form.
 09:59:10 **25** THE WITNESS: -- there's no such thing.

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09:59:11 **1** Q. (By Mr. Chachkes) All right. So let me
 09:59:11 **2** ask the same question again.
 09:59:11 **3** Are there any nationally or
 09:59:13 **4** internationally renowned TEM scientists that have
 09:59:14 **5** identified MAS as one of the best labs in the world
 09:59:17 **6** for testing talc?
 09:59:18 **7** MS. O'DELL: Object to the form.
 09:59:19 **8** THE WITNESS: Well, let me answer it.
 09:59:20 **9** There haven't been any that haven't said we're
 09:59:23 **10** not the best either, okay?
 09:59:25 **11** Q. (By Mr. Chachkes) Have any nationally or
 09:59:28 **12** internationally renowned PLM scientists identified
 09:59:31 **13** MAS as one of the best labs -- strike that.
 09:59:35 **14** Have you ever presented at any conferences
 09:59:37 **15** about testing talc with TEM?
 09:59:40 **16** A. No.
 09:59:40 **17** Q. Have you ever presented any conferences
 09:59:42 **18** about testing talc with PLM?
 09:59:44 **19** A. No.
 09:59:44 **20** Q. Have you ever presented -- have you ever
 09:59:50 **21** been invited to any conferences on the subject matter
 09:59:53 **22** of testing talc?
 09:59:55 **23** A. I can't recall any invitations.
 09:59:57 **24** Q. When did you personally first learn about
 10:00:01 **25** the ISO 22262-2 TEM method?
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10:00:05 **1** A. Oh, I don't know, a couple of years ago.
 10:00:08 **2** Q. From whom did you learn it?
 10:00:09 **3** A. I can't recall.
 10:00:14 **4** Q. When was the first time that anyone at MAS
 10:00:21 **5** tested a talc sample using the ISO 22262 method?
 10:00:25 **6** A. It probably was a couple of years ago, I
 10:00:28 **7** would think.
 10:00:29 **8** Q. Sometime in 2017?
 10:00:30 **9** MS. O'DELL: Object to form.
 10:00:31 **10** THE WITNESS: Again, I don't know an exact
 10:00:32 **11** date for that.
 10:00:33 **12** Q. (By Mr. Chachkes) Could it have been in
 10:00:34 **13** 2016?
 10:00:34 **14** A. I don't know. We have been using it for
 10:00:36 **15** quite a while. So as far as the exact date, I don't
 10:00:40 **16** know.
 10:00:40 **17** Q. Could it have be in 2015?
 10:00:42 **18** MS. O'DELL: Object to the form.
 10:00:43 **19** THE WITNESS: I don't know.
 10:00:44 **20** Q. (By Mr. Chachkes) You're the lab manager;
 10:00:46 **21** right? You were --
 10:00:46 **22** A. I was for a time, yes.
 10:00:47 **23** Q. Okay. Would you be aware of any ISO 22262
 10:00:52 **24** test of talc in your laboratory?
 10:00:56 **25** A. Yes.

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10:00:56 **1** Q. Could the first test have been in 2018?
 10:01:00 **2** A. Again, I don't know. It's been at least,
 10:01:04 **3** I don't know, two or three years at least.
 10:01:06 **4** Q. Okay. Did your analyst use ISO 22262 on
 10:01:13 **5** any talc samples prior to the testing reported on in
 10:01:16 **6** this report?
 10:01:17 **7** MS. O'DELL: Object to the form.
 10:01:18 **8** THE WITNESS: I don't know.
 10:01:19 **9** Q. (By Mr. Chachkes) Your report includes
 10:01:27 **10** EDXA spectra for several particles; correct?
 10:01:29 **11** A. The reports do, yes.
 10:01:30 **12** Q. Yeah. What is EDXA?
 10:01:35 **13** A. Energy dispersive spectroscopy -- x-ray
 10:01:38 **14** energy dispersive spectroscopy.
 10:01:38 **15** Q. Can you identify a particle of asbestos
 10:01:39 **16** using EDXA alone?
 10:01:42 **17** A. You mean a fiber, that type of thing, a
 10:01:45 **18** bundle, fiber bundle? You're just saying particle,
 10:01:45 **19** so --
 10:01:50 **20** Q. Okay.
 10:01:50 **21** A. Yeah, I'm just trying to be specific.
 10:01:52 **22** Q. So was the answer different to my question
 10:01:54 **23** whether I used the word particle or a fiber or
 10:01:56 **24** bundle?
 10:01:57 **25** A. No.
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10:02:00 **1** Q. Okay. So let me ask again.
 10:02:00 **2** A. Okay.
 10:02:02 **3** Q. Can you identify a particle of asbestos by
 10:02:04 **4** EDXA alone?
 10:02:06 **5** A. Yes. Well, no, not by just EDXA, no.
 10:02:10 **6** Q. Okay. Why not?
 10:02:11 **7** A. Well, they have the chemistry, and they
 10:02:14 **8** would be similar to the chemistry of another type of
 10:02:17 **9** fiber too.
 10:02:18 **10** Q. Can you distinguish anthophyllite from
 10:02:21 **11** talc using EDXA alone?
 10:02:24 **12** A. No. You need other methodologies, and
 10:02:29 **13** that's what we use. We use a suite of methodologies.
 10:02:32 **14** Q. Can you distinguish anthophyllite from
 10:02:39 **15** cummingtonite with EDXA alone?
 10:02:41 **16** A. The answer to that is no.
 10:02:43 **17** Q. So for the EDXA process, walk me through
 10:02:50 **18** the steps. What do you do?
 10:02:52 **19** A. Where do you want to start on that?
 10:02:55 **20** Q. Well, you've got a particle?
 10:02:56 **21** A. Okay.
 10:02:57 **22** Q. You've decided I want to do EDXA on that?
 10:03:01 **23** A. Right.
 10:03:01 **24** Q. What do you do next?
 10:03:02 **25** A. Well, essentially what the analyst does is
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10:03:04 **1** they will set the microscope up for the EDX process,
 10:03:10 **2** and that involves setting some lenses and condensers
 10:03:14 **3** in there so that you can focus the beam on the
 10:03:17 **4** particle.
 10:03:17 **5** Then the beam is focused. The
 10:03:20 **6** spectrometer is put into place in the microscope.
 10:03:24 **7** Then you, of course, begin the process of collecting
 10:03:29 **8** x-rays from the specimen.
 10:03:31 **9** Q. And then you get an EDXA spectrum?
 10:03:35 **10** A. Yes.
 10:03:36 **11** Q. Let's look at an example spectrum so you
 10:03:39 **12** could tell me about it. There's probably one that's
 10:03:42 **13** already been marked.
 10:03:52 **14** I'm going to present to you with what was
 10:03:54 **15** marked yesterday as Longo Number 12. Do you see
 10:03:57 **16** that?
 10:03:57 **17** A. Yes.
 10:03:58 **18** Q. And that's an EDXA spectra from your
 10:04:03 **19** expert report; correct?
 10:04:05 **20** MS. O'DELL: Object to the form.
 10:04:07 **21** THE WITNESS: If it's from our report,
 10:04:09 **22** yes.
 10:04:09 **23** Q. (By Mr. Chachkes) Okay. It is from your
 10:04:11 **24** report. So is that what an EDXA spectra looks like?
 10:04:20 **25** A. Yes.
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10:04:21 **1** Q. And you'll notice on the bottom left-hand
 10:04:26 **2** corner it says elements and it has got some elements
 10:04:28 **3** and it says total?
 10:04:29 **4** A. Yes.
 10:04:29 **5** Q. Your software can generate information
 10:04:31 **6** that fills in that; correct?
 10:04:32 **7** A. Yes.
 10:04:33 **8** Q. Why don't you turn that -- why don't you
 10:04:35 **9** use it, that software?
 10:04:36 **10** A. We do.
 10:04:38 **11** Q. Okay. Why in these experiments did you
 10:04:41 **12** not put in the information that can be generated on
 10:04:45 **13** the bottom left-hand side of Exhibit 12?
 10:04:48 **14** MS. O'DELL: Object to the form.
 10:04:49 **15** THE WITNESS: Well, there could be any
 10:04:50 **16** number of reasons for that. Typically, when
 10:04:54 **17** we're looking at these types of particles, they
 10:04:58 **18** have characteristic spectra for the -- if it's a
 10:05:02 **19** particular asbestos type.
 10:05:03 **20** For instance, this is tremolite. You can
 10:05:07 **21** turn the -- the data's there, so you can turn
 10:05:12 **22** that data on to show you what the oxides are for
 10:05:15 **23** the oxides.
 10:05:16 **24** Q. (By Mr. Chachkes) Is it a coincidence
 10:05:19 **25** that the data was not turned on for any of these, or
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10:05:22 **1** were the analysts actually instructed not to turn it
 10:05:25 **2** on?
 10:05:25 **3** **A.** No, it's not a coincidence.
 10:05:27 **4** **Q.** Okay. They were instructed to not
 10:05:28 **5** generate that data?
 10:05:29 **6** **A.** No. No, no, no. No.
 10:05:31 **7** **Q.** Now, is it standard operating practice not
 10:05:36 **8** to generate that data?
 10:05:37 **9** **A.** Is it standard operating practice --
 10:05:39 **10** **Q.** -- at MAS not to generate that data?
 10:05:41 **11** **A.** They don't have to generate it. It's not
 10:05:43 **12** required.
13 **Q.** Okay.
 10:05:43 **14** **A.** It's not required by the method.
 10:05:45 **15** **Q.** Is that data in the software, you just
 10:05:51 **16** choose not to print it out?
 10:05:53 **17** **MS. O'DELL:** Object to the form.
 10:05:54 **18** **THE WITNESS:** I would have to check on
 10:05:55 **19** that to see. So that's my answer to that right
 10:05:59 **20** now.
 10:05:59 **21** **Q.** (By Mr. Chachkes) Okay.
 10:06:00 **22** **A.** Yeah.
 10:06:00 **23** **Q.** And is that data -- you wouldn't
 10:06:04 **24** deliberately delete that data; right?
 10:06:06 **25** **A.** No, never.
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10:06:07 **1** **Q.** Is that data still at MAS, that if I asked
 10:06:10 **2** you to redo these with the data printed out, could
 10:06:12 **3** you do it?
 10:06:13 **4** **A.** I don't know. We would have to ask Bill
 10:06:16 **5** to see if it, in fact, is. It depends on the
 10:06:21 **6** software.
 10:06:23 **7** **Q.** Okay.
 10:06:23 **8** **A.** Yeah.
 10:06:24 **9** **MR. CHACHKES:** We would request that data
 10:06:25 **10** be produced. So if -- we'll make a formal
 10:06:30 **11** request for that.
 10:06:30 **12** **MS. O'DELL:** I think the data that's
 10:06:32 **13** available has been produced, it's provided in
 10:06:34 **14** the report, and so there's no further data.
 10:06:36 **15** **Q.** (By Mr. Chachkes) We'll --
 10:06:37 **16** **A.** Well, this is adequate to tell if this is
 10:06:39 **17** a characteristic spectrum of tremolite, but you can't
 10:06:44 **18** say, well, we know this is tremolite. We have other
 10:06:46 **19** methods that have to be coupled together to be able
 10:06:48 **20** to, you know, 99.9 percent say it is.
 10:06:52 **21** **Q.** I'm just talking about the data down
 10:06:53 **22** there.
 10:06:54 **23** **A.** Okay.
 10:06:54 **24** **Q.** Let's look at what was marked yesterday as
 10:06:56 **25** Exhibit 13. If you could look at like the last page.
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10:07:08 **1** Maybe just flip it up to the last page.
2 **A.** Okay.
 10:07:10 **3** **Q.** You see there, it's an EDXA printout.
 10:07:15 **4** This is not yours.
5 **A.** Sure.
 10:07:15 **6** **Q.** This is from Connecticut.
 10:07:17 **7** **A.** Uh-huh.
 10:07:17 **8** **Q.** And you see that -- it looks like it was
 10:07:18 **9** generated from the same software as yours, it's the
 10:07:21 **10** same fonts, same format. Is that a reasonable
 10:07:24 **11** conclusion?
 10:07:25 **12** **A.** I don't know --
 10:07:26 **13** **MS. O'DELL:** Object to the form.
 10:07:27 **14** **THE WITNESS:** -- we'd have to see. You
 10:07:29 **15** know, they're all -- there are a number of
 10:07:31 **16** different EDS software packages out there.
 10:07:34 **17** **Q.** (By Mr. Chachkes) Do you know the name of
 10:07:36 **18** your EDS software package?
 10:07:38 **19** **A.** I want to say it's called Revolutions.
 10:07:40 **20** **Q.** Are there different versions of the
 10:07:42 **21** Revolution software?
 10:07:43 **22** **A.** I don't know.
 10:07:44 **23** **Q.** And the information in the lower left, you
 10:07:48 **24** see that's generated for each of the relevant
 10:07:52 **25** elements, weight percentage, standard deviation,
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10:07:55 **1** atomic percentage, oxide percentage, other
 10:07:56 **2** information; do you see that?
 10:07:57 **3** **A.** Yes.
 10:07:58 **4** **Q.** Can you generate all that information if
 10:08:00 **5** you wanted to for your EDXA?
 10:08:04 **6** **MS. O'DELL:** Object to the form.
 10:08:06 **7** **THE WITNESS:** Again, it depends on the way
 10:08:07 **8** the software operates, if it's set up to be able
 10:08:11 **9** to collect that information and make those
 10:08:12 **10** statistics.
 10:08:12 **11** **Q.** (By Mr. Chachkes) For the EDXA
 10:08:15 **12** experiments that you ran for the purposes of the MDL
 10:08:18 **13** report, would you be able to generate that
 10:08:21 **14** information or you just don't know?
 10:08:23 **15** **MS. O'DELL:** Object to form.
 10:08:24 **16** **THE WITNESS:** I don't know.
 10:08:24 **17** **Q.** (By Mr. Chachkes) Okay. Do you
 10:08:27 **18** understand that that information, some people find
 10:08:30 **19** that useful?
 10:08:31 **20** **MS. O'DELL:** Objection.
 10:08:31 **21** **THE WITNESS:** It can be, yeah.
 10:08:33 **22** **Q.** (By Mr. Chachkes) Why?
 10:08:33 **23** **A.** Well, it can be useful in -- for instance,
 10:08:37 **24** if you're a research geologist and you're trying to
 10:08:41 **25** determine the composition and the makeup of an
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10:08:43 **1** unknown, that would be very helpful.
 10:08:44 **2 Q.** Okay. Why is it very helpful?
 10:08:46 **3 A.** Again, if they are -- if they're trying to
 10:08:49 **4** understand the composition of these materials, then
 10:08:52 **5** that information is part of info to try to figure out
 10:09:00 **6** what you're working with.
 10:09:01 **7 Q.** That information that we're talking about
 10:09:05 **8** a researcher can use to estimate the composition, the
 10:09:11 **9** chemical composition, of the subject particle; right?
 10:09:14 **10** MS. O'DELL: Object to form.
 10:09:14 **11** THE WITNESS: Yeah, they can estimate it.
 10:09:15 **12** They can estimate it.
 10:09:16 **13** MS. O'DELL: Dr. Rigler, give me just a
 10:09:19 **14** second before you answer.
 10:09:20 **15** THE WITNESS: Sure. Sorry.
 10:09:20 **16** MS. O'DELL: Thank you.
 10:09:20 **17 Q.** (By Mr. Chachkes) And one of the ways you
 10:09:23 **18** do that is by -- you take the ratios of the peak
 10:09:29 **19** areas of the metals to the silicon; right?
 10:09:32 **20 A.** That's one way to do it.
 10:09:33 **21 Q.** And if you were going to generate peak
 10:09:40 **22** areas for your EDXA you could do that; right?
 10:09:43 **23 A.** Yeah. I would say yes to that. Again, I
 10:09:46 **24** would have to look at the package to see what's in
 10:09:49 **25** there.
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10:09:49 **1 Q.** It's pretty fundamental. I would think
 10:09:51 **2** all packages have that; right?
 10:09:53 **3** MS. O'DELL: Object to the form.
 10:09:54 **4** THE WITNESS: Yes, but they vary in the
 10:09:55 **5** software, the way that the company has put the
 10:09:59 **6** software together.
 10:10:00 **7 Q.** (By Mr. Chachkes) Okay. So this process
 10:10:02 **8** of comparing ratios of metals to silicon, are you
 10:10:06 **9** comparing peak areas or just simply peak heights?
 10:10:09 **10 A.** Again, that varies. In a lot of cases
 10:10:13 **11** it's peak heights if you're working with -- depending
 10:10:17 **12** on what your methodology is.
 10:10:18 **13** For instance, I believe one of the
 10:10:21 **14** standard methodologies for asbestos analysis is in
 10:10:24 **15** the AHERA regulations, and I believe there they use
 10:10:30 **16** peak ratios in that, which I believe are based on
 10:10:33 **17** peak heights.
 10:10:34 **18 Q.** Okay. And what about for an unknown
 10:10:40 **19** chemical or crystal, what's more useful to determine
 10:10:46 **20** the chemical composition, peak heights or peak areas?
 10:10:49 **21** MS. O'DELL: Object to the form.
 10:10:50 **22** THE WITNESS: Either one can be used,
 10:10:51 **23** depending upon how you're calibrated.
 10:10:54 **24 Q.** (By Mr. Chachkes) It's your belief that
 10:10:55 **25** the peer-reviewed literature reflects that either
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10:10:59 **1** peak heights or peak areas can be used to determine
 10:11:02 **2** the chemical composition of the subject of an EDXA
 10:11:04 **3** analysis?
 10:11:05 **4 A.** Well --
 10:11:05 **5** MS. O'DELL: Object.
 10:11:06 **6** THE WITNESS: -- if we step back a minute,
 10:11:12 **7** these kinds of spectra are not the kinds of
 10:11:15 **8** spectra that we get when we're doing something
 10:11:17 **9** like mass spectrometer where we're really
 10:11:20 **10** looking at an area under a peak. You can do
 10:11:24 **11** peak heights on those, half width max types of
 10:11:29 **12** estimates with those.
 10:11:31 **13** These are spectrometers, and what they do
 10:11:33 **14** is they collect data in electron channels for
 10:11:37 **15** electron voltage. So typically what you do is
 10:11:41 **16** you bombard your specimen with the electron beam
 10:11:46 **17** for a period of time to get enough counts so
 10:11:50 **18** that the peaks are stable at a stable height,
 10:11:54 **19** and then you can compare the peak heights.
 10:11:57 **20** So peak area, you know, for this kind of a
 10:12:02 **21** spectrometer, again, you'll get different
 10:12:04 **22** opinions, but it's not the same type of thing
 10:12:07 **23** with the mass spectrometer. So peak heights
 10:12:09 **24** work very well for these.
 10:12:11 **25 Q.** (By Mr. Chachkes) Okay. It's not a
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10:12:12 **1** question about what works very well or --
 10:12:15 **2 A.** Well, it is kind of a question about what
 10:12:16 **3** works really well.
 10:12:17 **4 Q.** Okay. Focus on my question.
 10:12:18 **5 A.** I hear you, but you're kind of going to
 10:12:21 **6** it --
 10:12:21 **7 Q.** Focus on my question.
 10:12:23 **8 A.** I'm focusing.
 10:12:24 **9 Q.** The question is about peer-reviewed
 10:12:27 **10** literature --
 10:12:27 **11 A.** Let me just finish.
 10:12:28 **12** MS. O'DELL: Sorry.
 10:12:29 **13** THE WITNESS: Let me finish. I'm not
 10:12:29 **14** finished.
 10:12:30 **15** MS. O'DELL: Please finish.
 10:12:33 **16** THE WITNESS: Okay. Peak heights work
 10:12:34 **17** very well for this type of a spectrometer. Now,
 10:12:38 **18** we can get in all the minutia of area versus
 10:12:41 **19** peak height, but we have to know what kind of
 10:12:44 **20** system that we're talking about.
 10:12:46 **21 Q.** (By Mr. Chachkes) Same question.
 10:12:47 **22 A.** Okay.
 10:12:48 **23 Q.** Focus on what I'm asking, which is about
 10:12:50 **24** the peer-reviewed literature.
25 A. Okay.
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10:12:51 **1** Q. In the peer-reviewed literature where
10:12:53 **2** folks are looking at EDXA spectra to determine the
10:12:57 **3** chemical composition of an unknown subject --
10:13:00 **4** A. Okay.
10:13:01 **5** Q. -- does the peer-reviewed literature
10:13:04 **6** support both using peak heights and peak area to make
10:13:07 **7** that determination?
10:13:09 **8** MS. O'DELL: Object to the form.
10:13:10 **9** THE WITNESS: I would have to review the
10:13:12 **10** literature. Standard methods use peak height.
10:13:19 **11** Some may use peak area also. So as far as that,
10:13:22 **12** I would have to go and review it.
10:13:24 **13** Q. (By Mr. Chachkes) When you say standard
10:13:25 **14** methods, you mean in the peer-reviewed literature or
10:13:28 **15** something else?
10:13:28 **16** A. Sure. It would be -- if it's a standard
10:13:31 **17** method it's going to be peer-reviewed.
10:13:33 **18** Q. Okay. Looking at Exhibit 12 again, going
10:13:40 **19** back to your EDXA printout, did you do a
10:13:46 **20** comprehensive review of what minerals could
10:13:50 **21** correspond to this EDXA spectra other than what you
10:13:55 **22** believe it to be, which is tremolite?
10:13:57 **23** A. I didn't do a comprehensive review of
10:13:59 **24** this.
10:13:59 **25** Q. Did anybody do a comprehensive review of
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10:14:02 **1** the EDXA spectra to determine what other minerals
10:14:05 **2** they could correspond to?
10:14:07 **3** A. A comprehensive review. What do you mean
10:14:13 **4** by that?
10:14:13 **5** Q. So, for example, if an expert in
10:14:16 **6** mineralogy and EDXA mineralogy were to tell you this
10:14:19 **7** spectra in Exhibit 12 can correspond to dozens if not
10:14:24 **8** hundreds of other minerals, sitting here today, do
10:14:26 **9** you have any reason to dispute that?
10:14:27 **10** MS. O'DELL: Object to the form.
10:14:29 **11** THE WITNESS: I would say that it could
10:14:31 **12** correspond to a number of other minerals, yes.
10:14:34 **13** MR. CHACHKES: Okay.
10:14:35 **14** MS. O'DELL: Alex, excuse me. We've been
10:14:38 **15** going about an hour, a little over an hour. Can
10:14:40 **16** we take a short break, please?
10:14:41 **17** MR. CHACHKES: Yeah. Let me see if I can
10:14:43 **18** finish this part.
10:14:44 **19** MS. O'DELL: Are you ready for a break,
10:14:46 **20** Doctor?
10:14:46 **21** THE WITNESS: Sure.
10:14:48 **22** MR. CHACHKES: That's fine, we'll take a
10:14:50 **23** break.
10:14:51 **24** (Recess from 10:14 a.m. to 10:37 a.m.)
10:38:00 **25** Q. (By Mr. Chachkes) We spoke earlier about
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10:38:03 **1** you record your time; correct?
10:38:05 **2** A. As far as recording the time --
10:38:08 **3** Q. Yes.
10:38:09 **4** A. Yes, some of it, but not all of it.
10:38:11 **5** Q. Okay. And who do you give those time
10:38:13 **6** sheets to?
10:38:13 **7** A. I don't -- as I say, I go in and speak to
10:38:20 **8** Bill's assistant and then give her the hours that I
10:38:25 **9** have.
10:38:25 **10** Q. Is it your understanding that the other
10:38:26 **11** people in your laboratory are giving their hours to
10:38:28 **12** Bill's assistant?
10:38:29 **13** A. I don't know what they're doing.
10:38:31 **14** Q. Okay. Have they been instructed to keep
10:38:33 **15** their time?
10:38:33 **16** A. You'd have to ask Bill about that.
10:38:36 **17** Q. Okay. So I'd like to request of
10:38:37 **18** plaintiffs all invoices billed on behalf of the MDL
10:38:41 **19** at MAS.
10:38:46 **20** So let's --
10:38:48 **21** A. I wanted to -- before we got started, I
10:38:51 **22** wanted to bring up a point about the publications,
10:38:52 **23** because I know you were asking about that.
10:38:54 **24** Q. Okay.
10:38:54 **25** A. And it is our policy at our laboratory to
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10:38:58 **1** not discuss any possible publications that we may
10:39:02 **2** have pending. It's part of our policy, and it's
10:39:06 **3** actually what we consider as proprietary.
10:39:13 **4** MR. CHACHKES: I'm going to ask counsel
10:39:14 **5** again, are you going to allow me to ask a full
10:39:18 **6** set of questions about what the pending
10:39:19 **7** publication is?
10:39:20 **8** MS. O'DELL: No.
10:39:20 **9** MR. CHACHKES: Okay. We'll raise it with
10:39:21 **10** the magistrate.
10:39:21 **11** MS. O'DELL: He's answered your question.
10:39:23 **12** These are the invoices. It's two copies of one
10:39:26 **13** invoice, and you're welcome to ask him questions
10:39:28 **14** about it if you'd like.
10:39:29 **15** MR. CHACHKES: Okay. And we're also
10:39:30 **16** requesting all invoices from all people for who
10:39:35 **17** do bill time, the analysts, Bill, the works.
10:39:39 **18** MR. PARFITT: We'll take that under
10:39:39 **19** advisement.
10:39:39 **20** MS. O'DELL: Your request is noted. There
10:39:43 **21** will be an objection to that.
10:39:45 **22** MR. CHACHKES: Okay. Let's just mark --
10:39:47 **23** let me see if these are different. Yeah.
10:39:49 **24** MS. O'DELL: Let's see.
10:39:51 **25** MR. CHACHKES: Yeah, they're different.
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10:39:51 **1** One is for 9,000 and one is for 14.
 10:39:54 **2** MS. O'DELL: Oh, yeah.
 10:39:56 **3** **Q.** (By Mr. Chachkes) By the way, did you
 10:39:59 **4** bring any documents with you today?
 10:40:00 **5** **A.** I did.
 10:40:00 **6** **Q.** What documents did you bring with you?
 10:40:02 **7** **A.** Let me get them out.
 10:40:11 **8** MS. O'DELL: May I see those just a minute
 10:40:13 **9** to make sure.
 10:40:19 **10** THE WITNESS: The request.
 10:40:20 **11** **Q.** (By Mr. Chachkes) You don't have to hand
 10:40:22 **12** them to me, just tell me what they are.
 10:40:24 **13** **A.** Okay. Let's see. This is the notice of
 10:40:27 **14** oral and videotaped deposition.
 10:40:28 **15** **Q.** Well, let me just ask this question. Did
 10:40:29 **16** you bring any documents that I might not already
 10:40:31 **17** have? So I have your report, I have the subpoena, I
 10:40:36 **18** have the things lawyers exchange. Is there
 10:40:40 **19** anything --
 10:40:40 **20** **A.** You have the quality report?
 10:40:42 **21** **Q.** Yes, we have the quality report; correct?
 10:40:45 **22** And you brought that?
 10:40:46 **23** **A.** I brought a copy of that. There was one
 10:40:48 **24** minor typographical error I found in that.
 10:40:50 **25** **Q.** We'll get to that.
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10:40:52 **1** **A.** Okay.
 10:40:52 **2** **Q.** Anything else you brought that I might not
 10:40:54 **3** otherwise have?
 10:40:55 **4** **A.** You probably have everything. I brought
 10:40:59 **5** the starting weight sheets, the weight sheets that
 10:41:04 **6** we've used for the analysis. I think you guys had
 10:41:09 **7** requested all of that. What else? And the reports.
 10:41:11 **8** The same ones that you have here.
 10:41:13 **9** **Q.** So starting weight sheets, have those been
 10:41:16 **10** produced?
 10:41:17 **11** **A.** Yeah, I think they were sent over.
 10:41:19 **12** MS. O'DELL: Yes, those were produced. I
 10:41:21 **13** have one more invoice. I would ask that you not
 10:41:24 **14** mark this one because I need a clean copy and I
 10:41:26 **15** don't know why I don't have one in my folder,
 10:41:29 **16** actually, so I'll get a copy at the break.
 10:41:31 **17** MR. CHACHKES: Okay. Do you mind if I
 10:41:32 **18** take a photo of it?
 10:41:33 **19** MS. O'DELL: No. You're welcome to.
 10:41:34 **20** MR. CHACHKES: Okay. We will start with
 10:41:35 **21** that and then we can --
 10:41:35 **22** MS. O'DELL: Yeah. I'll copy it at the
23 break. I just would prefer --
24 MR. CHACHKES: Oh, we'll copy it at the
25 break. So why don't we do this, why don't we --
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10:41:38 **1** MS. O'DELL: I just prefer that that not
 10:41:41 **2** be marked.
 10:41:42 **3** MR. CHACHKES: Why don't we hold up the
 10:41:43 **4** invoices until a break. I don't have to ask
 10:41:45 **5** about them now. We'll do it as a set. I don't
 10:41:47 **6** want to --
 10:41:47 **7** MS. O'DELL: Sure.
 10:41:48 **8** **Q.** (By Mr. Chachkes) Okay. All right. Back
 10:41:51 **9** to EDXA.
 10:41:52 **10** **A.** All right.
 10:41:54 **11** **Q.** So -- now, you're aware that crystals have
 10:42:05 **12** certain characteristic ratios of metals to silicon?
 10:42:08 **13** **A.** Yes.
 10:42:09 **14** **Q.** Okay. And are you aware that tremolite
 10:42:11 **15** has a ratio of 5-to-8?
 10:42:14 **16** **A.** It can vary.
 10:42:16 **17** **Q.** When you say it can vary, what do you mean
 10:42:19 **18** by that?
 10:42:19 **19** **A.** Well, it can vary. I mean, per the
 10:42:22 **20** formula based on how many metal ions that tremolite
 10:42:27 **21** has, it can vary a bit.
 10:42:29 **22** **Q.** When you say a bit, what's the margin
 10:42:32 **23** error there?
 10:42:33 **24** **A.** You know, as far as a margin of error,
 10:42:36 **25** peak height ratios, that type of thing, it just
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10:42:41 **1** varies. So, you know, it varies.
 10:42:45 **2** **Q.** Do you have any opinion sitting here today
 10:42:47 **3** as to what the peer-reviewed literature suggests as
 10:42:51 **4** the acceptable variations when you're looking at an
 10:42:54 **5** EDXA for determining a mineral from the
 10:42:58 **6** metal-to-silicon ratio?
 10:42:59 **7** MS. O'DELL: Object to form.
 10:43:01 **8** THE WITNESS: I would have to look at the
 10:43:05 **9** literature to see what they are because I know
 10:43:08 **10** over the years as I've looked at different
 10:43:11 **11** references, and I've noticed the slightly
 10:43:14 **12** different, you know, ratios for the same
 10:43:17 **13** material.
 10:43:18 **14** **Q.** (By Mr. Chachkes) Okay. Because the
 10:43:19 **15** ratio actually should be a certain number because
 10:43:22 **16** it's based on the chemical formula which is what the
 10:43:25 **17** definition of the mineral is; correct?
 10:43:27 **18** **A.** Well, yes, but by electron spectroscopy
 10:43:32 **19** you can have a variation in the energy depending upon
 10:43:36 **20** takeoff angle and this and that kind of thing,
 10:43:39 **21** depending on the material. So you can have some
 10:43:42 **22** variation there. You know, purely based on the
 10:43:44 **23** formula, again, using a spectrometer, you're going to
 10:43:48 **24** get some variation.
 10:43:48 **25** **Q.** Okay. But ideally the ratio is going to
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10:43:52 **1** be a definite number because it's based on the
 10:43:57 **2** chemical formula, and the chemical formula for a
 10:43:58 **3** mineral is set in stone, as it were?
4 MS. O'DELL: Object to the form.
 10:44:02 **5** THE WITNESS: Well, again, now, if you're
 10:44:03 **6** just talking about the formula, then, yes, you
 10:44:05 **7** would have ratios based on the formula. You
 10:44:08 **8** know, forget the EDXA for a minute.
 10:44:10 **9** But based on the chemical formula and the
 10:44:12 **10** loading of the ions, you know, in that formula,
 10:44:15 **11** you're going to have, you know, a set amount
 10:44:19 **12** there. But when it comes to the actual
 10:44:21 **13** spectroscopy you're going to have a little bit
 10:44:23 **14** of variation.
 10:44:24 **15** Q. (By Mr. Chachkes) Okay. And just by way
 10:44:25 **16** of example, anthophyllite, the chemical formula, has
 10:44:29 **17** seven magnesiums, eight silicon; right?
 10:44:32 **18** A. Uh-huh.
 10:44:33 **19** Q. Is that a yes?
 10:44:34 **20** A. Yes.
21 Q. I'm sorry --
 10:44:38 **22** A. I t's okay.
 10:44:38 **23** Q. -- show up on the transcript.
 10:44:38 **24** And then that ratio of 7-to-8 is the ideal
 10:44:44 **25** metal-to-silicon ratio under EDXA for anthophyllite?
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 10:44:48 **1** A. Well, no, that's for the formula. That
 10:44:50 **2** would be for the formula. Once again, when you get
 10:44:53 **3** to a spectroscopic method, it's going to vary a bit.
 10:44:57 **4** Q. So did you -- so in Exhibit 12, do you see
 10:45:03 **5** how tremolite is written there at the top?
 10:45:05 **6** A. Yes.
 10:45:05 **7** Q. That's not what the machine generated
 10:45:07 **8** based on the spectra; you typed that in; correct?
 10:45:12 **9** A. The analyst typed that in, yes. But that
 10:45:14 **10** correlates with tremolite, with a tremolite spectrum.
 10:45:18 **11** Q. And so do you expect in this Exhibit 12
 10:45:25 **12** EDXA spectra that the ratio of metal to silicon is
 10:45:31 **13** going to be 5-to-8 or somewhere in the vicinity of
 10:45:34 **14** 5-to-8?
 10:45:35 **15** A. I t could be, yes.
 10:45:36 **16** Q. And when you say it could be, would you
 10:45:42 **17** identify something that has a metal-to-silicon ratio
 10:45:45 **18** nowhere near 5-to-8 as tremolite under EDXA?
 10:45:49 **19** MS. O'DELL: Object to the form.
 10:45:50 **20** THE WITNESS: Can you just restate the
 10:45:52 **21** question, please?
 10:45:53 **22** Q. (By Mr. Chachkes) Okay. What margin of
 10:45:54 **23** error in the metal-to-silicon ratio would be so great
 10:45:59 **24** that you would say, well, that's not tremolite?
 10:46:02 **25** A. Well, again, if, for instance, in this
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10:46:07 **1** spectrum, in Number 12, if the magnesium was up in
 10:46:11 **2** the middle somewhere up high towards the silicon
 10:46:14 **3** peak, you might have a question about it at that
 10:46:16 **4** point. If the calcium peak was down lower, then you
 10:46:20 **5** might have a question about it at that point too.
 10:46:22 **6** So you can get some variation again like
 10:46:26 **7** that, depending upon the mineralogy of tremolite in
 10:46:29 **8** that area. So again, you're going to have a little
 10:46:32 **9** bit of variation. But if it's too far away from
 10:46:35 **10** that, then, yeah, there's a question about that.
 10:46:37 **11** Q. Do you have any opinions sitting here
 10:46:39 **12** today whether the EDXA spectra in 12 is more like
 10:46:44 **13** another mineral than tremolite?
 10:46:47 **14** MS. O'DELL: Object to the form.
 10:46:48 **15** THE WITNESS: Well, I don't have an
 10:46:50 **16** opinion on that right now.
 10:46:52 **17** Q. (By Mr. Chachkes) And so did you actually
 10:46:55 **18** run the metal-to-silicon ratios for your EDXA?
 10:46:59 **19** MS. O'DELL: Object to the form.
 10:47:00 **20** THE WITNESS: I didn't run it, no.
 10:47:02 **21** Q. (By Mr. Chachkes) Okay. Did anybody run
 10:47:03 **22** it?
 10:47:03 **23** A. I don't know. I would have to check.
 10:47:04 **24** Q. As the author of the expert report that
 10:47:09 **25** has these EDXA spectra upon which you're making
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 10:47:12 **1** conclusions, wouldn't that be important information
 10:47:14 **2** to know?
 10:47:14 **3** MS. O'DELL: Object to the form.
 10:47:21 **4** MS. PARFITT: Objection.
 10:47:22 **5** THE WITNESS: The information that we have
 10:47:23 **6** from the spectrometer is accurate, and the peak
 10:47:29 **7** ratios that you see here are consistent with
 10:47:34 **8** tremolite. It could be consistent with some
 10:47:37 **9** other minerals. That's why we do not use EDS;
 10:47:42 **10** that's why we would do electron diffraction, and
 10:47:45 **11** we also look at the shape and the form of the
 10:47:47 **12** material, too. So those things together allow
 10:47:51 **13** us to say, yeah, this is tremolite.
 10:47:53 **14** Q. (By Mr. Chachkes) Okay. Do you go into
 10:47:54 **15** the EDXA -- do you take the EDXA spectra, say, I'm
 10:48:02 **16** going to assume it's an asbestos and now I'm going to
 10:48:05 **17** figure out which one? You don't do that, do you?
 10:48:07 **18** MS. O'DELL: Object to the form.
 10:48:08 **19** THE WITNESS: Typically what happens is
 10:48:12 **20** the analyst will take a spectrum, they'll look
 10:48:17 **21** at the spectrum, then they will flip over -- and
 10:48:20 **22** they're in the same spot, they'll refigure the
 10:48:24 **23** scope, and then they will do electron
 10:48:26 **24** diffraction.
 10:48:26 **25** They'll look at the diffraction pattern,
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10:48:28 **1** and then they will make a decision at that
10:48:29 **2** particular point as to whether it's consistent
10:48:32 **3** with that form or not. Then they'll index the
10:48:35 **4** pattern. They'll confirm that with verification
10:48:38 **5** of the indexing of the pattern.
10:48:39 **6** **Q.** (By Mr. Chachkes) Okay. So the EDXA --
10:48:44 **7** so the judgment call by the analyst to what mineral
10:48:48 **8** they're looking at is based on a combined looking at
10:48:51 **9** the EDXA spectra and the SAED?
10:48:56 **10** **A.** Yes, and also the form. The form.
10:49:02 **11** **Q.** And when you say the form, what do you
10:49:03 **12** mean, the form?
10:49:04 **13** **A.** Well, for instance, if it's a round
10:49:09 **14** structure or something that is not fibrous or
10:49:12 **15** crystalline as you would expect tremolite to be,
10:49:14 **16** then, you know, it's a guess as it could be some
10:49:17 **17** other form.
10:49:19 **18** **Q.** Can you cite to me any peer-reviewed
10:49:21 **19** literature or textbook, even, that says taking
10:49:26 **20** simultaneously the data from an EDXA, SAED, and the
10:49:32 **21** form is the proper way to identify a mineral?
10:49:37 **22** **MS. O'DELL:** Object to the form.
10:49:38 **23** **THE WITNESS:** Well, I mean, if you want to
10:49:39 **24** look at the way EPA said to do it and continues
10:49:42 **25** to say to do it, you know, in the '70s and the
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10:49:47 **1** '80s and was published, this is the way to do
10:49:50 **2** it.
10:49:50 **3** **Q.** (By Mr. Chachkes) Okay. So you've cited
10:49:52 **4** the EPA. Anything else, any other published sources?
10:49:55 **5** **A.** It's also done -- there are a number
10:49:57 **6** of ASTM -- they are referenced here in our report.
10:49:59 **7** **Q.** Okay. Is it your opinion that 22262
10:50:03 **8** sanctions that methodology?
10:50:05 **9** **A.** To my knowledge, yes.
10:50:06 **10** **Q.** Okay. And when you say EPA, what document
10:50:09 **11** are you referring to?
10:50:10 **12** **A.** That would be the AHERA document.
10:50:15 **13** CFR 763.
10:50:15 **14** **Q.** And so if you're cited CFR -- say it
10:50:21 **15** again?
10:50:21 **16** **A.** 763.
10:50:22 **17** **Q.** 763?
10:50:23 **18** **A.** Yep.
10:50:23 **19** **Q.** And then we cited 22262. Any other
10:50:26 **20** document that supports your methodological approach?
10:50:29 **21** **A.** Let me look here. We've referenced them
10:50:32 **22** here. There are a couple of ASTMs too. There's an
10:50:36 **23** ISO document -- well, the ISO is the 22 -- let me see
10:50:39 **24** which ones we've got.
10:50:45 **25** The ASTM D5755-09, D5756, the ISO 10312,
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10:51:03 **1** and there's also ISO 13794. The EPA one's here, it's
10:51:12 **2** 40 CFR part 763. They're on page 11 of the report.
10:51:19 **3** **Q.** Okay. Any other published literature that
10:51:21 **4** approves of this method that you're using?
10:51:23 **5** **MS. O'DELL:** Object to the form.
10:51:25 **6** **THE WITNESS:** Probably there are, but
10:51:28 **7** these are major standards that are used.
10:51:32 **8** **Q.** (By Mr. Chachkes) Sitting here today can
10:51:33 **9** you think of any others?
10:51:34 **10** **A.** I'm trying to think of them. As I sit
10:51:40 **11** here, I can't, but I know there are some others.
10:51:42 **12** **Q.** Okay.
10:51:42 **13** **A.** Yeah.
10:51:43 **14** **Q.** Now, let's take, for example, 22262.
10:51:48 **15** There's a section on EDXA; correct?
10:51:54 **16** **A.** To my knowledge there is, yes.
10:51:55 **17** **Q.** Right. And there's a section on SAED?
10:51:58 **18** **A.** I would have to look at it. I don't have
10:52:00 **19** it right in front me.
10:52:01 **20** **Q.** Okay.
10:52:01 **21** **A.** If you've got it, I'll look at it. I
10:52:03 **22** don't have it right in front of me.
10:52:03 **23** **Q.** Does 22262 expressly say you consider the
10:52:08 **24** EDXA and SAED together even though that independently
10:52:12 **25** they may be inconclusive?
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10:52:13 **1** **A.** I --
10:52:13 **2** **MS. O'DELL:** Excuse me.
10:52:15 **3** **Dr. Rigler,** I've got a copy here that was
10:52:17 **4** marked, if you need to see 22262-2. I'll
10:52:20 **5** provide it to you if counsel will not do that.
10:52:23 **6** **THE WITNESS:** Okay.
10:52:23 **7** **Q.** (By Mr. Chachkes) Let me ask this
10:52:24 **8** question. Are you able to answer the question --
10:52:26 **9** **MS. PARFITT:** Give him a chance to look at
10:52:28 **10** the document.
10:52:28 **11** **MR. CHACHKES:** I'm going to ask the
10:52:30 **12** question. You can --
10:52:30 **13** **MS. PARFITT:** No. Give him a chance,
10:52:30 **14** Alex --
10:52:30 **15** **Q.** (By Mr. Chachkes) Can you answer --
10:52:33 **16** **MS. PARFITT:** Alex, he's not going to
10:52:34 **17** answer the question.
10:52:34 **18** **Q.** (By Mr. Chachkes) Can you answer the
10:52:35 **19** question without being given the document? That's a
10:52:37 **20** simple question. Can you --
10:52:37 **21** **MS. PARFITT:** We need to --
10:52:38 **22** **MR. CHACHKES:** Are you going to shut that
10:52:40 **23** down?
10:52:40 **24** **MS. PARFITT:** I'm going to tell him to
10:52:41 **25** look at the document. The appropriate thing --
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10:52:43 **1** MR. CHACHKES: Okay. Another list for the
 10:52:43 **2** magistrate.
3 Go ahead.
 10:52:45 **4** MS. PARFITT: Excuse me. Let's make it
 10:52:46 **5** clear. So the question for the magistrate is
 10:52:48 **6** when you talk about a document and the witness
 10:52:50 **7** wants to see it, you want to bring up to the
 10:52:53 **8** magistrate that you aren't going to give it to
 10:52:55 **9** him? Is that the subject matter?
 10:52:56 **10** MR. CHACHKES: Let's look at the
 10:52:57 **11** transcript. Did he say he wanted to see it?
 10:52:58 **12** You said he wanted to see it.
 10:52:59 **13** MS. PARFITT: Dr. Rigler, would you like
 10:53:02 **14** to see the document?
 10:53:02 **15** THE WITNESS: Sure.
 10:53:03 **16** MS. PARFITT: Thank you.
 10:53:04 **17** MR. CHACHKES: All right.
 10:53:05 **18** MS. PARFITT: It's amusing, isn't it? Why
 10:53:08 **19** don't you act appropriate.
 10:53:09 **20** Q. (By Mr. Chachkes) Anyway, is it your
 10:53:10 **21** opinion that 22262 says you can take an inconclusive
 10:53:15 **22** EDXA and you can take an inconclusive SAED and
 10:53:19 **23** together make a determination of what mineral you're
 10:53:22 **24** looking at?
 10:53:23 **25** MS. O'DELL: Object to the form.
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10:53:24 **1** THE WITNESS: I would have to take a break
 10:53:26 **2** to read it and review it, and then I can give
 10:53:28 **3** you an answer to that question.
 10:53:29 **4** Q. (By Mr. Chachkes) Okay. Sitting here
 10:53:29 **5** today, you can't answer that off the top of your
 10:53:32 **6** head?
 10:53:32 **7** MS. PARFITT: Objection. Misstates his
 10:53:34 **8** testimony.
9 THE WITNESS: That's right.
10 Q. (By Mr. Chachkes) Okay.
 10:53:34 **11** A. I could give you an answer. I just need
 10:53:36 **12** some time to review the document.
 10:53:37 **13** Q. Okay. And is it the same answer for the
 10:53:38 **14** other standards that you cited? Sitting here today,
 10:53:42 **15** could you tell me just off the top of your head
 10:53:44 **16** whether those other standards that you cited allow
 10:53:47 **17** for someone to take an inconclusive SAED and
 10:53:50 **18** inconclusive EDXA together with maybe a visual
 10:53:56 **19** morphology decision and judge what mineral you're
 10:53:59 **20** looking at?
 10:54:00 **21** MS. O'DELL: Object to the form.
 10:54:00 **22** THE WITNESS: Well, the answer to the
 10:54:02 **23** question is these parts are required to be able
 10:54:09 **24** to come up with an answer of what the mineral
 10:54:11 **25** is.
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10:54:11 **1** So, yes, you start with an inconclusive;
 10:54:15 **2** yes, you start with an inconclusive; yes, you
 10:54:17 **3** start with an inconclusive; and you put those
 10:54:19 **4** together to come up with a conclusive answer.
 10:54:21 **5** Q. (By Mr. Chachkes) Okay.
 10:54:21 **6** A. Yep.
 10:54:22 **7** Q. At a break I would like you to look at
 10:54:26 **8** your document --
 10:54:28 **9** A. Okay.
 10:54:28 **10** Q. -- and specifically look for somewhere
 10:54:30 **11** where it says you can take three separate and
 10:54:32 **12** independent inconclusive analytical results and
 10:54:36 **13** combine them to make a conclusive result. Okay?
 10:54:43 **14** MS. O'DELL: Object to the form.
 10:54:44 **15** THE WITNESS: Well, let me just state that
 10:54:48 **16** in science, one of the best ways to come up with
 10:54:51 **17** a good answer is use multiple techniques to be
 10:54:54 **18** able to make a conclusion. You use one
 10:54:57 **19** particular technique, that's good. You use
 10:55:02 **20** another technique in conjunction with that,
 10:55:04 **21** that's better. Use three techniques in
 10:55:07 **22** conjunction with that, that's very good.
 10:55:09 **23** So typically this is the way that we work
 10:55:13 **24** as scientists. So that's the way that these
 10:55:19 **25** documents are written, you know. Again, a good
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10:55:22 **1** example is AHERA as to how they would do that,
 10:55:24 **2** they want the scientists to do it.
 10:55:25 **3** Q. (By Mr. Chachkes) Will you do me that
 10:55:28 **4** favor of during a break look at 22262 and coming up
 10:55:31 **5** with your specific opinion as to whether it allows
 10:55:34 **6** for someone to take an inconclusive -- three
 10:55:37 **7** inconclusive results, combine them for a conclusive
 10:55:39 **8** result?
 10:55:39 **9** MS. O'DELL: Object to the form.
 10:55:40 **10** And you're not required to do any homework
 10:55:42 **11** for counsel during a break.
 10:55:45 **12** Q. (By Mr. Chachkes) Okay. So you will not
 10:55:48 **13** during a break do that; correct?
 10:55:49 **14** MS. PARFITT: You want him to do it right
 10:55:51 **15** now? It's on your time.
 10:55:53 **16** MR. CHACHKES: It's a question for the
 10:55:54 **17** witness.
 10:55:54 **18** MS. PARFITT: The question for the witness
 10:55:56 **19** is -- you were asking him to do homework off the
 10:55:59 **20** record on his break; am I correct? Is that what
 10:56:01 **21** you're asking him?
 10:56:02 **22** MR. CHACHKES: He has a --
 10:56:02 **23** MS. PARFITT: Let me ask you a question.
 10:56:03 **24** MR. CHACHKES: If you're just going to
 10:56:04 **25** talk over me, there's no conversation here.
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10:56:05 **1** MS. PARFITT: You know, Alex, you have a
 10:56:07 **2** difficult time talking over people as well, so
3 I'm not trying to --
 10:56:10 **4** MR. CHACHKES: I'll let you finish. Go
5 ahead.
6 MS. PARFITT: Thank you. I appreciate
 10:56:13 **7** that. It's very kind of you.
 10:56:13 **8** Are you asking him to do a project for you
 10:56:16 **9** on his break; is that what you're asking him?
 10:56:18 **10** MR. CHACHKES: He has come here as an
 10:56:20 **11** expert on the subject matter of how one
 10:56:21 **12** determines whether there's asbestos in talc, and
 10:56:23 **13** he has testified that there are various
 10:56:24 **14** standards by which they sanction his
 10:56:27 **15** methodology. I want a specific opinion as to
 10:56:30 **16** how indeed that happens.
 10:56:32 **17** So he should be able to do that. He
 10:56:34 **18** should have come prepared for that. So I want
 10:56:35 **19** him to read the document and come back with
 10:56:38 **20** specifics. That's what I want.
 10:56:39 **21** MS. PARFITT: Well, I think there may be a
 10:56:41 **22** miscommunication. I don't think he's telling
 10:56:43 **23** you he can't do it. The difference is if you
 10:56:46 **24** want to ask him that question, he goes through
 10:56:48 **25** it right now while we're on the record, that's

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10:56:51 **1** fine.
 10:56:51 **2** MR. CHACHKES: I'll tell you what we'll
 10:56:53 **3** do. I plan to finish without exhausting my
 10:56:56 **4** seven-hour time. If it takes a few hours to go
 10:57:00 **5** through documents, we'll do that at the end,
6 okay?
7 MS. PARFITT: Go through --
8 THE WITNESS: Well, I think --
 10:57:02 **9** MR. CHACHKES: He can do it on the record.
 10:57:02 **10** He can just sit there reading the documents on
 10:57:04 **11** the record. We'll stay here until 9:00 if
 10:57:06 **12** that's what's required.
 10:57:08 **13** MS. PARFITT: That's fine.
 10:57:11 **14** MR. CHACHKES: Okay. I mean, right now I
 10:57:13 **15** understand the dispute to be not whether he can
 10:57:17 **16** go through the documents and give me the answer.
 10:57:18 **17** You just want it on the record.
 10:57:19 **18** MS. PARFITT: What I would like to have on
 10:57:20 **19** the record is your question and his response and
 10:57:22 **20** he will tell you -- since I'm not testifying --
 10:57:24 **21** he will tell you whether he can respond in kind
 10:57:27 **22** to your question and in an appropriate manner.
 10:57:30 **23** If the appropriate manner for him to respond to
 10:57:33 **24** your question requires him to look at something,
 10:57:36 **25** then he's entitled to do it.

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10:57:36 **1** MR. CHACHKES: And I would appreciate in
 10:57:37 **2** the future when I ask those questions you don't
3 tell the witness how the appropriate manner is,
 10:57:39 **4** that he is allowed to finish answering the
 10:57:40 **5** questions.
 10:57:41 **6** MS. PARFITT: Well, let's not trip a
 10:57:43 **7** witness. I think let's have a very honest
 10:57:45 **8** discussion with the witness, all right?
 10:57:46 **9** So that's what we're trying to do is have
 10:57:49 **10** an honest discussion with the witness, and I see
 10:57:55 **11** you're trying to do that.
 10:57:55 **12** Q. (By Mr. Chachkes) Okay. So you said the
 10:57:58 **13** analyst is simultaneously doing an EDXA and an SAED;
14 correct?
 10:58:03 **15** A. They can.
 10:58:03 **16** Q. They can.
 10:58:04 **17** A. Well, I mean, simultaneously -- you have
 10:58:06 **18** to do one at a time, but you can do them essentially
 10:58:11 **19** in the same sitting.
 10:58:12 **20** Q. Would the analyst -- would it be
 10:58:15 **21** appropriate for an analyst to take something like
 10:58:18 **22** Exhibit 12 without having done the SAED yet, without
 10:58:20 **23** having done visual morphology yet, to make a
 10:58:23 **24** conclusion about what mineral they're looking at?
 10:58:26 **25** A. Well, that's not the way we do it.

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10:58:30 **1** Q. Would it be appropriate to do it that way?
 10:58:32 **2** A. I'm telling you that's the way we do it.
 10:58:33 **3** Q. The question is as an expert in the area,
 10:58:35 **4** is it appropriate to do it? If they did it, would it
 10:58:37 **5** be inappropriate?
 10:58:38 **6** A. They could do it.
 10:58:39 **7** MS. O'DELL: Object to the form.
 10:58:40 **8** THE WITNESS: They could do it if they
 10:58:41 **9** wanted to, but that's not the way we do it.
 10:58:43 **10** Q. (By Mr. Chachkes) Okay. And it wouldn't
 10:58:44 **11** be inappropriate -- when I say inappropriate, bad
 10:58:47 **12** science?
 10:58:48 **13** MS. O'DELL: Object to the form.
 10:58:49 **14** THE WITNESS: Bad science? I don't know
 10:58:51 **15** what you mean by that.
 10:58:52 **16** Q. (By Mr. Chachkes) Okay. So something
 10:58:55 **17** that would not give you within a reasonable degree of
 10:59:00 **18** scientific certainty the conclusion that, ah, this is
 10:59:01 **19** the mineral I'm looking at?
 10:59:02 **20** A. Well, they would want to do that. They
 10:59:05 **21** would be required to do that at our laboratory.
 10:59:07 **22** Q. Yeah.
 10:59:08 **23** A. They wouldn't just look at one of these
 10:59:09 **24** and say, yeah, it's tremolite.
 10:59:11 **25** Q. Okay. But I'm asking -- it's not

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10:59:12 **1** empirically what's going on, so focus on the
 10:59:15 **2** question. The question is, is it bad science to take
 10:59:17 **3** only, like in Exhibit 12, EDXA and a spectrum and
 10:59:25 **4** make a conclusion about the mineral?
 10:59:27 **5** MS. O'DELL: Object to the form.
 10:59:28 **6** THE WITNESS: Is it bad science? It's
 10:59:31 **7** observation. They can make an observation which
 10:59:33 **8** may lead them to additional kinds of
 10:59:37 **9** observations. You may take an expert in
 10:59:40 **10** mineralogy who looks at this and goes yeah, it's
 10:59:43 **11** tremolite. You may take an expert in mineralogy
 10:59:46 **12** in academia that would say it was.
 10:59:49 **13** Q. (By Mr. Chachkes) Okay. So it is good
 10:59:50 **14** science to take something like the EDXA printout in
 10:59:54 **15** isolation and say I know what mineral that is?
 10:59:55 **16** MS. O'DELL: Object to the form.
 10:59:56 **17** Misstates his testimony.
 10:59:57 **18** THE WITNESS: Right, we -- again, that's
 10:59:59 **19** not the way that we do that at our laboratory.
 11:00:01 **20** And you may have an academic that does that
 11:00:03 **21** who's a crystallographer or mineralogist who
 11:00:06 **22** looks at that and goes, yeah, it's tremolite.
 11:00:09 **23** Q. (By Mr. Chachkes) So what is your
 11:00:16 **24** recommended procedure for -- when is the tremolite
 11:00:18 **25** typed in the top? Is it right after the EDXA
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11:00:20 **1** printout comes up?
 11:00:21 **2** A. Well, as I say, they've done the
 11:00:25 **3** diffraction, they've looked at this. They may do
 11:00:28 **4** another EDS on this to verify what they got to start
 11:00:31 **5** with, and then they would probably type that in there
 11:00:34 **6** then.
 11:00:34 **7** Q. Okay. I've seen no sample for which there
 11:00:36 **8** are two EDS. Does that mean we have not received
 11:00:39 **9** these duplicate EDS runs?
 11:00:42 **10** MS. O'DELL: Object to the form.
 11:00:43 **11** THE WITNESS: Well, no. Again, they may
 11:00:46 **12** do -- they may start to do an EDS on that, go,
 11:00:51 **13** yeah, that looks like tremolite, let me do the
 11:00:53 **14** diffraction on this, right, and then they may
 11:00:55 **15** come back and do a 300 seconds on the EDS.
 11:00:59 **16** So, you know, they're not going to call it
 11:01:01 **17** unless they're sure of it from the diffraction.
 11:01:05 **18** Q. (By Mr. Chachkes) Do you have a policy at
 11:01:08 **19** MAS for the order in which the various analyses are
 11:01:10 **20** done?
 11:01:10 **21** A. Well, we have a protocol for that --
 11:01:13 **22** Q. Okay.
 11:01:13 **23** A. -- yeah.
 11:01:13 **24** Q. Is it written?
 11:01:14 **25** A. To my knowledge, yes.
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11:01:15 **1** Q. Okay. I would ask that that be produced.
 11:01:18 **2** Sitting here now, do you remember what
 11:01:20 **3** that protocol is, which comes first, like EDS or SAED
 11:01:27 **4** or visual morphology under TEM?
 11:01:29 **5** A. Yeah, I want to say that it is EDS first,
 11:01:31 **6** and then they do the diffraction, but I would have to
 11:01:35 **7** look and see what it is.
 11:01:37 **8** Q. Do the analysts type in the mineral
 11:01:41 **9** identification at the top of the printout at the time
 11:01:45 **10** they do the EDS before they do the diffraction?
 11:01:48 **11** MS. O'DELL: Object to the form. Asked
 11:01:49 **12** and answered.
 11:01:49 **13** THE WITNESS: Again, I would have to -- I
 11:01:52 **14** would have to see. I can't recall right now.
 11:01:55 **15** They're not going to type that on there unless
 11:01:57 **16** they're sure that -- understand that.
 11:01:59 **17** Q. (By Mr. Chachkes) It's a question
 11:02:00 **18** about timing.
 11:02:01 **19** A. Yes, I understand the question about
 11:02:03 **20** timing. I get that. I get it.
 11:02:04 **21** They can start to do an EDS, then they can
 11:02:07 **22** do diffraction, and then they can make the call on
 11:02:11 **23** that. They're not going to make the call unless
 11:02:13 **24** they're sure.
 11:02:14 **25** Q. Do you know whether the -- so it's
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11:02:18 **1** possible that they go back into the software after
 11:02:22 **2** the diffraction and type in the name of the mineral
 11:02:26 **3** at the top of the EDS?
 11:02:27 **4** MS. O'DELL: Object to the form.
 11:02:28 **5** THE WITNESS: I don't know. I would have
 11:02:29 **6** to find out. But again, they're not going to
 11:02:32 **7** type that in there unless they're sure of it.
 11:02:34 **8** Q. (By Mr. Chachkes) Okay.
 11:02:34 **9** A. That's what you need to understand.
 11:02:35 **10** Q. Yeah, I know -- I understand your --
 11:02:35 **11** A. I want you to understand that. You don't
 11:02:37 **12** seem to understand that.
 11:02:38 **13** Q. You have said that ten times --
 11:02:39 **14** A. Good.
 11:02:40 **15** Q. -- it's on the record --
 11:02:41 **16** A. I want to make it clear.
 11:02:42 **17** Q. What I understand or don't understand is
 11:02:43 **18** really not at issue. It's what you understand, okay?
 11:02:46 **19** Do you understand that?
 11:02:46 **20** A. Sure.
 11:02:48 **21** Q. Okay.
 11:02:48 **22** A. And what I'm telling you is it's not typed
 11:02:50 **23** on there unless they're sure of it.
 11:02:52 **24** Q. All right. Now you've said that many
 11:02:52 **25** times.
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11:02:53 **1** A. I can say it again.
11:02:54 **2** Q. Okay. And so do you -- I guess I'd have
11:02:59 **3** to talk to the analyst to figure out how they do
11:03:01 **4** this.
11:03:01 **5** MS. O'DELL: Object to form.
11:03:02 **6** THE WITNESS: You can talk to Dr. Longo
11:03:03 **7** and he can also tell you.
11:03:04 **8** Q. (By Mr. Chachkes) Yeah, but he's not
11:03:05 **9** doing the runs either, is he?
11:03:07 **10** A. Well, he directs the lab.
11:03:08 **11** Q. All right.
11:03:08 **12** A. So it's his responsibility.
11:03:10 **13** Q. Okay. And looking at Exhibit 12, the
11:03:18 **14** EDXA, what tells you that this is tremolite?
11:03:20 **15** A. The peak sets that you have here.
11:03:23 **16** Q. Okay. And when you say -- walk me through
11:03:26 **17** that.
11:03:26 **18** A. The peak sets?
11:03:27 **19** Q. Yes. Why are these peak sets tremolite
11:03:30 **20** and not some other mineral?
11:03:32 **21** A. Some other mineral. Well, again, until
11:03:35 **22** you do the diffraction, you may not be completely
11:03:38 **23** sure of it, but the mag and the silicon ratios look
11:03:42 **24** correct and as well as the calcium ratios for
11:03:44 **25** tremolite.
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11:03:45 **1** Now, there's a small iron peak there. If
11:03:47 **2** that iron peak was increased significantly, it would
11:03:50 **3** be actinolite.
11:03:52 **4** Q. Okay. Are there any instances where your
11:04:01 **5** analysts get an EDS printout or spectra and say, ah,
11:04:09 **6** that's not an asbestos?
11:04:12 **7** A. I'm sure there are, yeah, yes.
11:04:14 **8** Q. Okay. Give me an instance where there's
11:04:16 **9** magnesium silicon peaks. What --
11:04:18 **10** MS. O'DELL: Object to the form.
11:04:18 **11** Q. (By Mr. Chachkes) What were they looking
11:04:20 **12** for?
11:04:20 **13** MS. O'DELL: Object to the form.
11:04:21 **14** Incomplete hypothetical.
11:04:23 **15** THE WITNESS: Well, they may be looking at
11:04:27 **16** certain types of clay minerals that may have a
11:04:31 **17** mag-silicon ratio. You know, forget the calcium
11:04:34 **18** for a minute. But they may go, well, you know,
11:04:36 **19** that's not talc. They may do a diffraction on
11:04:39 **20** it and they get some diffuse pattern, something
11:04:42 **21** like that, and they go, you know, it's not that
11:04:44 **22** so they'll move on. Essentially it's sort of a
11:04:48 **23** screening process.
11:04:49 **24** Q. (By Mr. Chachkes) Okay. Are there
11:05:00 **25** instances where an EDXA looks more like talc than
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11:05:10 **1** actinolite?
11:05:12 **2** A. Well -- it looks more like talc than
11:05:19 **3** actinolite, you're saying?
11:05:20 **4** Q. Yeah.
11:05:21 **5** A. I'd have to think about that. It's
11:05:23 **6** possible. Yeah, it's possible.
11:05:25 **7** Q. Okay. And what would you be looking for?
11:05:27 **8** A. Well, depending upon how much iron was in
11:05:33 **9** there. You know, you can have fibrous talc that
11:05:35 **10** would have, you know, some iron with it, that kind of
11:05:39 **11** thing. So it would just depend on the -- it would
11:05:41 **12** depend on the form and look at the diffraction
11:05:43 **13** pattern.
11:05:43 **14** Q. Is there an EDXA in isolation that you
11:05:47 **15** would say that's definitely talc, it is not
11:05:50 **16** actinolite?
11:05:50 **17** A. Yeah, I mean, again, if the iron -- if it
11:05:56 **18** practically has no iron and you're looking at the
11:05:58 **19** form of it and it's a plate, you go, well, yeah,
11:06:01 **20** that's most likely talc; you do the diffraction on
11:06:05 **21** it, it's most likely talc.
11:06:06 **22** Q. So you brought in form, you brought in
11:06:07 **23** diffraction --
11:06:08 **24** A. Right.
11:06:08 **25** Q. -- so I'm saying let's put those aside.
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11:06:10 **1** Just in isolation, just looking at the EDXA, is there
11:06:13 **2** an EDXA that in isolation you can say that's
11:06:15 **3** definitely talc, it's not actinolite?
11:06:17 **4** MS. O'DELL: Object to the form.
11:06:18 **5** THE WITNESS: Again, if it had no iron --
11:06:24 **6** I mean, you're looking at the thing. It's not
11:06:26 **7** like you're not looking at it. It's on the
11:06:28 **8** screen in front of you, so you can't divorce
11:06:30 **9** that from it. So if I'm looking at the form of
11:06:32 **10** it, I can tell whether it's platy or whether
11:06:33 **11** it's fibrous.
11:06:35 **12** Q. (By Mr. Chachkes) Okay. Is there an
11:06:38 **13** instance -- there's an EDXA in isolation that you
11:06:42 **14** know is definitely tremolite and not actinolite?
11:06:45 **15** MS. O'DELL: Object to the form.
11:06:47 **16** THE WITNESS: No. No, not in isolation.
11:06:49 **17** Q. (By Mr. Chachkes) Okay. Do your analysts
11:07:02 **18** record peak heights?
11:07:03 **19** A. Do they record peak heights?
11:07:06 **20** Q. Yes.
11:07:06 **21** A. I don't think so.
11:07:07 **22** Q. Okay. Do they record peak areas?
11:07:10 **23** A. Again, the software does that.
11:07:12 **24** Q. The judgment that your analysts make when
11:07:17 **25** they're typing in the top of the EDXA of this
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11:07:19 **1** mineral --
 11:07:20 **2** **A.** Yes.
 11:07:20 **3** **Q.** -- as far as the EDXA printout goes, it's
 11:07:22 **4** qualitative, not quantitative?
 11:07:24 **5** **A.** Well, yeah, it is a qualitative analysis
 11:07:28 **6** as they're looking at this.
 11:07:29 **7** **Q.** And do you understand, when I say
 11:07:31 **8** qualitative, it's not based on precise numbers, it's
 11:07:34 **9** based on kind of their eyeball look at it?
 11:07:36 **10** MS. O'DELL: Object to the form.
 11:07:37 **11** THE WITNESS: That's the way most, I would
 11:07:40 **12** say, laboratories do this.
 11:07:41 **13** **Q.** (By Mr. Chachkes) So you include a lot of
 11:07:48 **14** SAED patterns for -- in your report; right?
 11:07:52 **15** **A.** Yes.
 11:07:52 **16** **Q.** Okay. What is SAED?
 11:07:53 **17** **A.** Selected area electron diffraction.
 11:07:55 **18** **Q.** Can you just at a high level tell me how
 11:07:58 **19** that works?
 11:08:00 **20** **A.** Tell you how it works?
 11:08:01 **21** **Q.** Yeah, just -- you know, you've got -- it's
 11:08:03 **22** in the TEM, what do you do?
 11:08:04 **23** **A.** Yep. We talked about it a little bit
 11:08:07 **24** before. You essentially set the microscope up to
 11:08:13 **25** isolate the beam on the area of interest, and then
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11:09:32 **1** done in one axis, pick it up and say I am sure that's
 11:09:36 **2** an amphibole?
 11:09:36 **3** **A.** Yeah, if you measure it out, if you do the
 11:09:40 **4** verification, you know, you do the measurements on
 11:09:42 **5** it, it will give you the lattice parameters of an
 11:09:46 **6** amphibole of some type or, you know, maybe a
 11:09:49 **7** serpentine of some type if it's chrysotile. And then
 11:09:52 **8** you can go, yeah, this is a -- it possibly is at this
 11:09:56 **9** point.
 11:09:56 **10** **Q.** Okay. I'm not asking if it possibly is.
 11:09:58 **11** I'm saying is there a one-axis diffraction pattern
 11:10:01 **12** that is uniquely -- strike that.
 11:10:07 **13** **A.** Yeah.
 11:10:07 **14** **Q.** If I had a one-axis diffraction pattern
 11:10:12 **15** for a phyllosilicate, there's no way you're going to
 11:10:15 **16** confuse that with an amphibole?
 11:10:17 **17** **A.** Probably not.
 11:10:19 **18** **Q.** Why not?
 11:10:20 **19** **A.** They're stacked layers versus what is in
 11:10:28 **20** an amphibole where you have essentially -- I don't
 11:10:34 **21** know how to describe it. They're like railroad iron,
 11:10:41 **22** what do you call it, like railroad tracks. That's
 11:10:44 **23** how they're stacked up in an amphibole; whereas in a
 11:10:47 **24** phyllosilicate, you've got flat planes mostly.
 11:10:50 **25** **Q.** Okay. If I were to hand you a one-axis
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11:08:17 **1** it's very much like -- the sample is much like a
 11:08:23 **2** prism.
 11:08:24 **3** You know how you hold a prism up in the
 11:08:26 **4** light and it breaks it all up into colors. All
 11:08:28 **5** right. So the reason that's happening is because the
 11:08:30 **6** electrons or, in this case, the wavelength of light,
 11:08:33 **7** is slowed so that you get the different colors.
 11:08:38 **8** In this case, the electron beam goes
 11:08:40 **9** through the specimen and it strikes the lattice
 11:08:44 **10** planes. These are the planes that make up the
 11:08:46 **11** crystal and they reflect off and they give you all of
 11:08:48 **12** these spots, patterns. And they're specific for the
 11:08:51 **13** kind of material that you're looking at.
 11:08:52 **14** **Q.** Okay. Can you identify a particle as
 11:08:55 **15** asbestos with SAED alone?
 11:08:58 **16** MS. O'DELL: Object to the form.
 11:08:59 **17** THE WITNESS: You can get to an
 11:09:06 **18** understanding of whether this is an amphibole,
 11:09:11 **19** and then from there you need the other
 11:09:12 **20** information to help make the conclusion.
 11:09:15 **21** **Q.** (By Mr. Chachkes) And can you understand
 11:09:20 **22** if a particle is an amphibole based on an SAED
 11:09:25 **23** with -- in isolation that's only done with one axis?
 11:09:27 **24** **A.** Yes, you can could that.
 11:09:29 **25** **Q.** Okay. So you can see an SAED that's only
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11:10:51 **1** SAED right now, you could tell me whether it was an
 11:10:54 **2** amphibole versus a phyllosilicate?
 11:10:56 **3** **A.** Probably. I don't know if I could tell
 11:10:59 **4** you as I sit here right now, but, you know, based on
 11:11:01 **5** the knowledge of the planes, measuring the crystal
 11:11:08 **6** planes, it's a good possibility you could say, yeah,
 11:11:10 **7** it's probably an amphibole.
 11:11:11 **8** **Q.** Okay. Within a reasonable degree of
 11:11:13 **9** scientific certainty?
 11:11:13 **10** **A.** Yeah, I think you could say that, but
 11:11:17 **11** you'd want more data on it to be able to call the
 11:11:20 **12** class.
 11:11:20 **13** **Q.** Did you do a comprehensive review of
 11:11:23 **14** crystalline material to determine whether there are
 11:11:28 **15** SAED patterns in one axis that look like amphiboles?
 11:11:35 **16** MS. O'DELL: Object to the form.
 11:11:36 **17** THE WITNESS: Well, I think the answer to
 11:11:37 **18** that is there are a number of them, and
 11:11:42 **19** depending upon the plane, the axis of the plane,
 11:11:52 **20** you know, you've got to do the measurements on
 11:11:54 **21** those.
 11:11:54 **22** So the answer to that is there are a
 11:11:57 **23** number of different planes; but in any one
 11:12:00 **24** sitting, again, if you get a good diffraction
 11:12:04 **25** pattern, you can still measure that pattern and
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11:12:08 **1** come up with whether it is an amphibole.
 11:12:10 **2 Q.** (By Mr. Chachkes) The original question
 11:12:12 **3** is whether you did a comprehensive review of minerals
 11:12:14 **4** other than amphiboles, other than serpentine, to
 11:12:17 **5** determine whether there are one-axis SAED diffraction
 11:12:21 **6** patterns that you can't without more axes determine
 11:12:25 **7** whether it's an amphibole or another class. Did you
 11:12:29 **8** do that?
 11:12:29 **9** MS. O'DELL: Object to -- excuse me.
 11:12:30 **10** MR. CHACHKES: Let me finish my question.
 11:12:31 **11 Q.** (By Mr. Chachkes) Did you do such a
 11:12:32 **12** comprehensive review?
 11:12:34 **13** MS. O'DELL: Objection to form. That
 11:12:35 **14** wasn't the previous question. Object to the
 11:12:37 **15** form.
 11:12:37 **16** THE WITNESS: Well, I didn't do a
 11:12:39 **17** comprehensive review.
 11:12:40 **18 Q.** (By Mr. Chachkes) Okay. Did anybody do a
 11:12:41 **19** comprehensive review?
 11:12:42 **20 A.** Well --
 11:12:45 **21** MS. O'DELL: Object to the form.
 11:12:46 **22** THE WITNESS: -- understand -- once again,
 11:12:48 **23** understand that there's a huge body of
 11:12:53 **24** literature and standard methodologies that are
 11:12:55 **25** used for identifying these classes of minerals.
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11:13:00 **1** It's well known.
 11:13:01 **2** You don't have to have -- I mean, you have
 11:13:04 **3** to have an awareness of that there that there
 11:13:07 **4** could be others, but focused in on these types
 11:13:10 **5** of minerals, you know, there's plenty of data to
 11:13:15 **6** be able to make a decision based on looking at
 11:13:18 **7** one plane.
 11:13:20 **8** For instance, chrysotile is a good
 11:13:22 **9** example. You can look at the diffraction
 11:13:24 **10** pattern and see that it's streaked and right
 11:13:27 **11** away know that I possibly have this kind of, you
 11:13:32 **12** know, asbestiform mineral, let me look at the
 11:13:36 **13** morphology, oh, it's rolled up like a scroll.
 11:13:39 **14** That's chrysotile. Oh, when I do the EDS, I've
 11:13:42 **15** got practically a 1-to-1 mag-silicon ratio.
 11:13:47 **16** Wow. You know, 99 percent sure that this is
 11:13:49 **17** chrysotile.
 11:13:49 **18 Q.** (By Mr. Chachkes) The original question
 11:13:51 **19** was did anybody at MAS --
 11:13:52 **20 A.** I answered that.
 11:13:53 **21 Q.** Okay. Let me ask --
 11:13:54 **22 A.** Not to cut you off --
 11:13:54 **23 Q.** You just did cut me off.
 11:13:54 **24 A.** -- but I already answered that.
 11:13:55 **25 Q.** Okay. Let me ask again.
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11:13:56 **1** Did anybody at -- it's a yes or no
 11:13:59 **2** question.
 11:13:59 **3** Did anybody at MAS do a comprehensive
 11:14:01 **4** review to determine what I've asked?
 11:14:05 **5** MS. O'DELL: Object --
 11:14:05 **6** THE WITNESS: You'd have to ask Bill
 11:14:07 **7** Longo.
 11:14:07 **8** MS. O'DELL: Excuse me.
 11:14:08 **9** THE WITNESS: You'd have to ask Dr. Longo.
 11:14:08 **10 Q.** (By Mr. Chachkes) Okay. Sitting here
 11:14:09 **11** today you don't know?
 11:14:09 **12** MS. O'DELL: Object to form.
 11:14:09 **13** THE WITNESS: He could give you that
 11:14:14 **14** answer.
 11:14:14 **15 Q.** (By Mr. Chachkes) Okay. What about
 11:14:14 **16** you --
 11:14:14 **17** THE REPORTER: Wait, wait. You're talking
 11:14:14 **18** at the same time.
 11:14:14 **19** THE WITNESS: Dr. Longo. Sorry.
 11:14:22 **20** Dr. Longo.
 11:14:22 **21 Q.** (By Mr. Chachkes) Okay. But you can't
 11:14:22 **22** give me the answer? I have to ask Dr. Longo?
 11:14:26 **23 A.** I don't know. That's my answer. Ask
 11:14:29 **24** Dr. Longo.
 11:14:29 **25 Q.** Is there a -- so there are SAED axes;
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11:14:38 **1** correct?
 11:14:38 **2 A.** Yes.
 11:14:38 **3 Q.** And you can take an SAED image or pattern
 11:14:44 **4** on an axis or off an axis; right?
 11:14:47 **5 A.** Uh-huh, yes.
 11:14:47 **6 Q.** All right. Is there an off-axis single
 11:14:53 **7** SAED diffraction pattern that is signature-only
 11:14:57 **8** amphiboles?
 11:14:57 **9 A.** I would have to review that, but typically
 11:15:07 **10** the answer is if you get -- if you verify the
 11:15:15 **11** spacing, the atomic spacings, at the variance for
 11:15:19 **12** each one of the minerals, one of the -- you know,
 11:15:23 **13** asbestiform minerals -- you know, they're in a group,
 11:15:26 **14** there's a range for actually that spacing too, so --
 11:15:30 **15** but if you come within that spacing, then you most
 11:15:32 **16** likely have an amphibole.
 11:15:33 **17 Q.** I wasn't asking you about most likely.
 11:15:35 **18** I'm asking about conclusive, 100 percent, you know
 11:15:38 **19** that's an amphibole.
 11:15:39 **20** MS. O'DELL: Object to the form.
 11:15:40 **21** THE WITNESS: I just told you.
 11:15:41 **22 Q.** (By Mr. Chachkes) Okay. You used the
 11:15:44 **23** word most likely. Let me ask you a different way.
 11:15:47 **24 A.** What -- I try to answer -- you keep
 11:15:49 **25** breaking these technologies up that we're using to
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11:15:54 **1** verify this, which includes morphology, the shape and
11:15:57 **2** form, which includes the chemistry, the EDS, and the
11:16:01 **3** SAED required in the standard methods, all right.
11:16:04 **4** These are the things. Each one of them by
11:16:08 **5** themselves, no.
11:16:09 **6** **Q.** Okay. I'm only asking questions. I'm not
11:16:12 **7** telling you what your report is consisting of. I'm
11:16:14 **8** not telling you anything. I'm just asking questions.
11:16:16 **9** So if you could just focus on the question --
11:16:19 **10** **A.** I'm trying to focus on it, but you keep
11:16:21 **11** bringing up things that don't go together. All
11:16:24 **12** right. They don't go together for the analysis.
11:16:25 **13** **Q.** Okay. If I were to tell you that a career
11:16:36 **14** academic mineralogist looked at one of your single
11:16:40 **15** axis identifications of an asbestos and said that
11:16:47 **16** SAED diffraction pattern can correspond to many
11:16:52 **17** different minerals, would you have reason to dispute
11:16:55 **18** that?
11:16:55 **19** **A.** No.
11:16:56 **20** **MS. O'DELL:** Object to the form.
11:16:57 **21** **Q.** (By Mr. Chachkes) Okay. If I brought in
11:16:58 **22** that same mineralogist who said this single axis
11:17:02 **23** diffraction pattern that you have can correspond to
11:17:07 **24** some nonamphibole minerals, do you have -- sitting
11:17:11 **25** here today do you have a reason to dispute that?
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11:17:13 **1** **A.** Yes.
11:17:14 **2** **Q.** Okay. What is that reason?
11:17:14 **3** **A.** Well, I would have to see what the -- what
11:17:18 **4** they were disputing. I'd have to see the data first.
11:17:20 **5** And then I would like to know the qualifications of
11:17:23 **6** this expert and I would like to see what their
11:17:25 **7** quality control is in order to be able to say this
11:17:29 **8** person -- especially in academia, because academia
11:17:32 **9** most of the time doesn't have any kind of quality
11:17:34 **10** control.
11:17:34 **11** So I look a little bit less on their --
11:17:40 **12** you know, they may have been a professor in this for
11:17:42 **13** who knows how long. How long have they worked in the
11:17:45 **14** laboratory? What's their quality control? What have
11:17:48 **15** they done? This is what I want to know.
11:17:50 **16** **Q.** Do you --
11:17:51 **17** **A.** The analysts that we have -- so let me
11:17:53 **18** answer the question.
11:17:54 **19** The analysts we have essentially go
11:17:57 **20** through a process where they are tested by NIST
11:18:02 **21** NVLAP. Think are tested on a quarterly basis on
11:18:05 **22** unknowns that NIST sends to us that we have to
11:18:08 **23** identify, okay.
11:18:10 **24** So what academic professor does that?
11:18:13 **25** None that I know of.
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1 **Q.** Okay.
11:18:14 **2** **A.** So you can bring up all the academic
11:18:17 **3** professors, and I will dispute, you know, a lot of
11:18:19 **4** what they do.
11:18:20 **5** **Q.** Okay. If a supremely complicated --
11:18:27 **6** strike that.
11:18:27 **7** If a supremely qualified mineralogist and
11:18:31 **8** SAED expert were to tell you that one of your single
11:18:34 **9** axis diffraction patterns that you identified as
11:18:37 **10** asbestos can correspond to a nonamphibole -- on a
11:18:43 **11** theoretical basis based on the structure of the
11:18:45 **12** nonamphibole, sitting here today, do you have a
11:18:46 **13** reason to dispute that?
11:18:47 **14** **MS. O'DELL:** Object to the form.
11:18:49 **15** **THE WITNESS:** Yes.
11:18:49 **16** **Q.** (By Mr. Chachkes) Okay. What is that?
11:18:50 **17** **A.** I just told you. I'm not going to go
11:18:51 **18** through the answer all over again.
11:18:54 **19** **Q.** Okay. That was all practical. I'm now
11:18:56 **20** talking about theoretical.
11:18:56 **21** **A.** Same for that one, too. Same answer.
11:18:57 **22** **Q.** SAED patterns correspond to the lattice of
11:19:02 **23** a mineral; correct?
11:19:03 **24** **A.** Correct.
11:19:03 **25** **Q.** Is there a nonamphibole that has a lattice
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11:19:09 **1** that could possibly give you a single axis
11:19:13 **2** diffraction pattern that looks like an amphibole?
11:19:17 **3** **A.** I don't know the answer to that because
11:19:20 **4** most of them are -- they have diffraction data for
11:19:24 **5** all these minerals, and there will be slight
11:19:27 **6** differences between them. So, you know, I would have
11:19:29 **7** to look at the data.
11:19:29 **8** **Q.** Okay. Can you identify -- okay, I think I
11:19:33 **9** already asked -- did I already ask you if you can
11:19:35 **10** identify a particle with SAED alone?
11:19:35 **11** **A.** Yeah.
11:19:36 **12** **Q.** Okay. I'm not going to --
11:19:37 **13** **A.** Yep.
11:19:38 **14** **Q.** -- again.
11:19:39 **15** Did I ask whether you can distinguish
11:19:41 **16** anthophyllite from talc --
11:19:42 **17** **A.** Yes.
11:19:42 **18** **Q.** -- SAED alone?
11:19:43 **19** **A.** Yes.
11:19:44 **20** **Q.** Okay. Sorry if I'm --
11:19:46 **21** **A.** That's okay.
11:19:46 **22** **Q.** Oh, I know where I am.
11:19:48 **23** Can you distinguish anthophyllite from
11:19:50 **24** cummingtonite with SAED alone?
11:19:53 **25** **A.** Let's see. The answer to that is
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11:20:00 **1** possibly.
 11:20:02 **2 Q.** When you say possibly, can you be
 11:20:04 **3** specific?
 11:20:04 **4 A.** Again, you'd have to do -- you'd have to
 11:20:08 **5** do zone axis in a couple of different zones to tell,
 11:20:11 **6** and then you probably can say it's most likely. But
 11:20:14 **7** again, you'd want to do -- you'd want to do the EDS
 11:20:17 **8** and you'd, of course, look at the form of it, too.
 11:20:19 **9 Q.** So how many zone axes would you need if
 11:20:22 **10** you only had SAED to rely on to determine whether you
 11:20:25 **11** were looking at anthophyllite or cummingtonite?
 11:20:28 **12** MS. O'DELL: Object to the form.
 11:20:29 **13** THE WITNESS: You could do -- you could
 11:20:31 **14** use one. It depends on the pattern that you
 11:20:34 **15** see. If it was more of an orthorhombic pattern,
 11:20:39 **16** you know, most likely anthophyllite; if it was
 11:20:44 **17** more a monoclinic pattern, most likely
 11:20:45 **18** cummingtonite.
 11:20:45 **19 Q.** (By Mr. Chachkes) Okay. Let me just show
 11:20:45 **20** you what was marked yesterday as Exhibit 15.
 11:20:55 **21** Do you have 15? No. Here it is, I'm
 11:20:58 **22** sorry. Okay.
 11:21:01 **23** I'll represent to you what was -- what's
 11:21:05 **24** in Exhibit 15 is pulled from a textbook. Do you
 11:21:08 **25** recognize that as an SAED pattern in three axes?
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11:21:55 **1** measured that, when you measure out for each one of
 11:21:57 **2** the sets or wherever it would be, there are
 11:21:59 **3** parameters -- lattice parameters in each one of those
 11:22:03 **4** zones, and that would still be tremolite.
 11:22:04 **5 Q.** Okay. If --
 11:22:06 **6 A.** It would still be tremolite.
 11:22:07 **7 Q.** Okay.
 11:22:08 **8 A.** Okay.
 11:22:08 **9 Q.** Are you done?
 11:22:09 **10 A.** Yeah.
 11:22:09 **11 Q.** Okay. If you had an SAED pattern for a
 11:22:11 **12** mineral in three separate axes and each one was
 11:22:14 **13** exactly the same, could it possibly be tremolite?
 11:22:17 **14** MS. O'DELL: Object to the form.
 11:22:18 **15** THE WITNESS: I don't know.
 11:22:18 **16 Q.** (By Mr. Chachkes) Wouldn't that mean it
 11:22:20 **17** was a symmetric lattice and that tremolite doesn't
 11:22:24 **18** have a symmetric lattice?
 11:22:27 **19 A.** Again, I don't know how to answer that
 11:22:28 **20** question.
 11:22:29 **21 Q.** Are you aware of what the lattice of
 11:22:30 **22** tremolite looks like?
 11:22:31 **23 A.** Yes. I am. It is monoclinic.
 11:22:35 **24 Q.** Okay. Is it perfectly symmetrical in the
 11:22:38 **25** X, Y, and Z axes?
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11:21:10 **1 A.** Yes.
 11:21:11 **2 Q.** And is there any reason to believe this is
 11:21:12 **3** an incorrect three-axes SAED pattern for tremolite?
 11:21:16 **4** MS. O'DELL: Object to form.
 11:21:17 **5** THE WITNESS: I have no idea on that.
 11:21:18 **6** What was this published in; do you know?
 11:21:20 **7 Q.** (By Mr. Chachkes) It's not coming to my
 11:21:21 **8** mind right now but --
 11:21:22 **9 A.** I need to know that.
 11:21:22 **10 Q.** Okay.
 11:21:23 **11 A.** Yep. I can't make any decisions on that
 11:21:26 **12** unless I know the surrounding stuff here.
 11:21:27 **13 Q.** That's fine.
 11:21:28 **14 A.** Yeah.
 11:21:28 **15 Q.** Sitting here today, any reason to believe
 11:21:30 **16** this is incorrect?
 11:21:31 **17** MS. O'DELL: Object to the form.
 11:21:33 **18** THE WITNESS: Again --
 11:21:34 **19** MS. O'DELL: He's answered your question.
 11:21:36 **20** THE WITNESS: Yep. It's hard to tell
 11:21:38 **21** without, you know, knowing where this is from.
 11:21:42 **22 Q.** (By Mr. Chachkes) Okay. Is it your
 11:21:44 **23** understanding that tremolite can have different SAED
 11:21:48 **24** patterns in the three different axes?
 11:21:52 **25 A.** Again, it could. But once again, when you
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11:22:40 **1 A.** I don't know. I'd have to look at it.
 11:22:42 **2 Q.** Okay. We can take a break now, if you
 11:22:51 **3** like.
 11:22:51 **4 A.** Do you need a break?
 11:22:52 **5 Q.** Yeah.
 11:22:54 **6 A.** Sure.
 11:22:54 **7** (Recess from 11:22 a.m. to 11:42 a.m.)
 11:42:33 **8 Q.** (By Mr. Chachkes) Would you agree with
 11:42:52 **9** the statement that the more complete the SAED pattern
 11:42:56 **10** an analyst obtains, the more likely the analyst is to
 11:43:00 **11** make an accurate determination of the crystal
 11:43:02 **12** structure?
 11:43:03 **13 A.** I don't know what you mean by complete.
 11:43:08 **14** Aside from the definition of the SAED pattern,
 11:43:16 **15** sometimes they can be faint; they can be light. So
 11:43:21 **16** the more defined the pattern is, I would say that
 11:43:24 **17** helps.
 11:43:24 **18 Q.** Okay. When you say defined, you mean the
 11:43:26 **19** kind of the -- when you say faint and light, that's
 11:43:31 **20** just a matter of how dark the dot is?
 11:43:32 **21 A.** Yeah, well, the diffraction pattern
 11:43:34 **22** sometimes can be very -- it can be very faint, so,
 11:43:38 **23** you know, it just depends. So the more defined the
 11:43:43 **24** pattern is, the better.
 11:43:43 **25 Q.** What about the more focused the pattern,
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11:43:46 **1** the better?
 11:43:47 **2** **A.** Again, the pattern is usually going to be
 11:43:52 **3** focused properly -- when the microscope is set up
 11:43:55 **4** properly, you're going to get a good defined pattern.
 11:43:58 **5** So it's mainly the ability to see all the spots there
 11:44:04 **6** associated with that particular zone.
 11:44:06 **7** **Q.** If you get a SAED pattern where the dots
 11:44:09 **8** are unfocused, can that hamper the ability to
 11:44:14 **9** identify the crystal?
 11:44:15 **10** MS. O'DELL: Object to the form.
 11:44:16 **11** THE WITNESS: The answer to that is no.
 11:44:18 **12** Sometimes we see patterns that are smeared or
 11:44:21 **13** diffuse. Again, chrysotile is a good example of
 11:44:23 **14** that.
 11:44:24 **15** But if you see a very diffuse pattern,
 11:44:28 **16** then you may have what's more like an amorphous,
 11:44:31 **17** not a very crystalline material, and you'll see
 11:44:34 **18** that in rings.
 11:44:35 **19** **Q.** (By Mr. Chachkes) Are there instances
 11:44:36 **20** where you are unable to obtain a clear SAED pattern
 11:44:40 **21** so your data in that scenario is inconclusive?
 11:44:44 **22** MS. O'DELL: Object to the form.
 11:44:45 **23** THE WITNESS: You will work to get the
 11:44:51 **24** best pattern that you can out of the structure
 11:44:52 **25** that you have, so the answer to that is you
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11:44:54 **1** won't use a pattern that's not acceptable.
 11:44:57 **2** **Q.** (By Mr. Chachkes) Right. The question
 11:44:58 **3** isn't about -- so the question is -- let me ask a
 11:45:01 **4** different question.
 11:45:01 **5** **A.** Okay.
 11:45:02 **6** **Q.** In doing the MDL samples, did you ever run
 11:45:04 **7** across a case where you were unable to obtain a clear
 11:45:09 **8** SAED pattern and so the SAED was inconclusive?
 11:45:12 **9** MS. O'DELL: Object to the form.
 11:45:13 **10** THE WITNESS: I don't know of any, no.
 11:45:14 **11** **Q.** (By Mr. Chachkes) Analysts can use the
 11:45:18 **12** information obtained from SAED to make distinctions
 11:45:22 **13** in the crystal system of the lattice, for example,
 11:45:27 **14** whether it's triclinic, monoclinic, cubic, or
 11:45:30 **15** orthorhombic?
 11:45:33 **16** **A.** Yes.
 11:45:33 **17** **Q.** Okay. Sorry.
 11:45:37 **18** **A.** I paused.
 11:45:38 **19** **Q.** Yes.
 11:45:50 **20** Describe how you or your analysts
 11:45:53 **21** calibrate the SAED apparatus.
 11:45:56 **22** **A.** The electron diffraction? Again, I'm not
 11:45:59 **23** an expert in that particular area, but what they
 11:46:02 **24** typically do is they'll do a sizing based on gold, a
 11:46:08 **25** film of gold, and from that they will make
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11:46:12 **1** calculations on what the gold lattice parameters are,
 11:46:17 **2** and then they will compare that to the unknown using
 11:46:21 **3** that particular configuration.
 11:46:23 **4** **Q.** Okay. Sometimes you say diffraction
 11:46:27 **5** pattern, and just to be clear --
 11:46:29 **6** **A.** Sure.
 11:46:29 **7** **Q.** -- diffraction pattern, you're being
 11:46:32 **8** synonymous with SAED?
 11:46:34 **9** **A.** Yes.
 11:46:34 **10** **Q.** And how do your analysts determine when
 11:46:38 **11** it's appropriate to take multiple axes for a single
 11:46:42 **12** sample under SAED?
 11:46:43 **13** **A.** That's a good question. Typically we'll
 11:46:46 **14** do that for anthophyllite to verify that it is
 11:46:50 **15** anthophyllite. We'll take multiples on that.
 11:46:52 **16** It's not required in the standard method
 11:46:55 **17** to do that because typically you can do it in one
 11:46:58 **18** zone for the amphiboles. But to show that it's not
 11:47:04 **19** fibrous talc versus anthophyllite, you're essentially
 11:47:08 **20** going to take another one to verify it.
 11:47:10 **21** **Q.** Okay. For tremolite, you take one axis?
 11:47:12 **22** **A.** Yes, you can.
 11:47:13 **23** **Q.** Okay. Not what -- I'm not asking about
 11:47:15 **24** what you can do. So let me put it --
 11:47:17 **25** **A.** Yes.
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11:47:18 **1** **Q.** Okay.
 11:47:18 **2** **A.** The answer's yes.
 11:47:19 **3** **Q.** Okay. There are no SAED patterns that you
 11:47:23 **4** created for the MDL samples that weren't produced;
 11:47:23 **5** correct?
 11:47:25 **6** **A.** Correct.
 11:47:26 **7** **Q.** And I'm seeing one SAED pattern for the
 11:47:29 **8** tremolite, meaning can I conclude that you've only
 11:47:32 **9** taken one SAED pattern for the tremolites?
 11:47:34 **10** **A.** I would say yes to that.
 11:47:35 **11** **Q.** Okay. And I'm seeing two SAED patterns
 11:47:39 **12** for anthophyllite. Is it okay for me to conclude
 11:47:41 **13** that you take only two patterns for anthophyllite?
 11:47:45 **14** **A.** Most likely yes, because again, we want to
 11:47:48 **15** be able to distinguish that from fibrous talc.
 11:47:52 **16** **Q.** Let's look at another exhibit. What
 11:48:00 **17** number is that? Is that like 16? Let's look at 16.
 11:48:08 **18** **A.** Okay.
 11:48:08 **19** **Q.** Do you recognize what's been marked as
 11:48:10 **20** Longo Exhibit 16?
 11:48:13 **21** **A.** Yes.
 11:48:13 **22** **Q.** What's a diffraction verification?
 11:48:17 **23** **A.** These are diffractions that have been done
 11:48:21 **24** on a sample that's already been analyzed, and what
 11:48:24 **25** the analyst does is they go back in and they verify
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11:48:27 **1** the diffraction pattern. They verify that it is, in
 11:48:31 **2** fact, whatever it was called before.
 11:48:33 **3 Q.** Yeah, I see that -- do you see the date
 11:48:37 **4** verified down there in the lower left?
 11:48:39 **5 A.** Which one are we looking at? Page 1?
 11:48:40 **6 Q.** Let's look at the first page of that --
7 A. Okay.
 11:48:42 **8 Q.** -- that you actually see a verification.
 11:48:44 **9** Most if not all of the verifications are after the
 11:48:47 **10** date of your first report; is that correct?
 11:48:51 **11** MS. O'DELL: At least on this page?
12 THE WITNESS: Yeah.
 11:48:53 **13** MR. CHACHKES: Well, it's a question.
 11:48:54 **14** THE WITNESS: I would think -- what's the
 11:48:55 **15** question again?
 11:48:56 **16 Q.** (By Mr. Chachkes) The question is were
 11:48:56 **17** most if not all of your verifications for the MDL
 11:48:59 **18** samples done after the date of your first report,
 11:49:02 **19** which was October 14?
 11:49:03 **20 A.** I don't know. I'd have to look at these
 11:49:05 **21** and compare that to that date.
 11:49:06 **22 Q.** Okay. This verification, for example, was
 11:49:13 **23** done after the date of your first report; correct?
 11:49:16 **24 A.** Yes.
 11:49:16 **25 Q.** Okay. And you're --
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11:50:18 **1** 4.94 to 5.46. So within that range, if your spacing
 11:50:23 **2** falls within that range, it could be grunerite.
 11:50:28 **3 Q.** Now, for this verification page, you
 11:50:34 **4** calculated a d-spacing of 5.23; correct?
 11:50:38 **5 A.** Correct.
 11:50:38 **6 Q.** And that falls within the range of every
 11:50:40 **7** single amphibole on that list; right?
 11:50:43 **8 A.** Correct.
 11:50:43 **9 Q.** How was it that this verifies that this is
 11:50:46 **10** anthophyllite when it falls within the range of every
 11:50:48 **11** amphibole in your list?
 11:50:49 **12 A.** Well, again, this is not -- this is an
 11:50:52 **13** incomplete. We have to look at the EDS, and we also
 11:50:56 **14** have to look at the form again. So with that
 11:50:59 **15** standard methodology, then we can come to a
 11:51:02 **16** conclusion that it is anthophyllite.
 11:51:03 **17** So it's not done in a vacuum, if you will.
 11:51:05 **18** The only thing that's done in a vacuum is putting the
 11:51:08 **19** sample into the electron microscope.
 11:51:10 **20** But that is true, and you will see that
 11:51:13 **21** for these lattice parameters.
 11:51:18 **22 Q.** Okay. For this sample that we're looking
 11:51:22 **23** at, the d-spacing indeed corresponds to grunerite,
 11:51:24 **24** actinolite, tremolite, crocidolite, and
 11:51:27 **25** anthophyllite; correct?
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11:49:18 **1 A.** Are you talking about the November report?
 11:49:19 **2 Q.** November 14 --
 11:49:20 **3 A.** Yes.
 11:49:20 **4 Q.** -- I'm saying that's the first report.
 11:49:21 **5 A.** Sure.
 11:49:22 **6 Q.** So at the very least, you had already
 11:49:25 **7** determined by October 14 that this sample on the
 11:49:29 **8** first page corresponded to anthophyllite before you
 11:49:37 **9** had done the verification; correct?
 11:49:44 **10 A.** Well, the answer to that is yes, we
 11:49:46 **11** already had determined it was anthophyllite.
 11:49:47 **12 Q.** Okay. And so the verification's, what,
 11:49:49 **13** kind of a belt and suspenders?
 11:49:51 **14 A.** Sure.
 11:49:51 **15** MS. O'DELL: Object to the form.
 11:49:52 **16** THE WITNESS: Well, I mean, it's a
 11:49:54 **17** follow-up.
 11:49:54 **18 Q.** (By Mr. Chachkes) Okay. And I see that
 11:49:58 **19** there's a range in the table of amphibole types up
 11:50:02 **20** there at the top; do you see that?
 11:50:04 **21 A.** Yes.
 11:50:04 **22 Q.** What does the range column mean?
 11:50:07 **23 A.** That is the actual atomic spacing for that
 11:50:11 **24** lattice parameter. And, for instance, if you take
 11:50:15 **25** grunerite at the beginning there, you'll see it's
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11:51:27 **1** MS. O'DELL: Object to the form.
 11:51:28 **2** THE WITNESS: Well, I mean, it's within
 11:51:29 **3** the range there. Again, this is why you can't
 11:51:32 **4** just use the one method to say, oh, I'm going to
 11:51:35 **5** use SAED and say that it is anthophyllite.
 11:51:38 **6** You've got to go look at the form of it;
 11:51:40 **7** you've got to go do the EDS to prove that it is.
 11:51:44 **8** So yeah.
 11:51:47 **9 Q.** (By Mr. Chachkes) Yeah, you would not use
 11:51:48 **10** EDS d-spacing alone to determine the mineral you're
 11:51:53 **11** looking at because it falls under too many different
 11:51:55 **12** minerals; correct?
 11:51:55 **13** MS. O'DELL: Object to the form.
 11:51:56 **14** THE WITNESS: It tells you that it is an
 11:51:58 **15** amphibole, that it is in that range. And again,
 11:52:00 **16** we do -- let's see. There should be another one
 11:52:03 **17** here of the same one. Let's see.
 11:52:10 **18** Number 301 01. If you go to the next
 11:52:12 **19** page, you'll see this is the same structure
 11:52:14 **20** again, same structure again, the second
 11:52:17 **21** verification. Down here you'll see the zone, it
 11:52:20 **22** was a 101, and the d-spacing for that zone are
 11:52:25 **23** shown there for each one of the angles -- you
 11:52:27 **24** know, each one of the lattice parameters, and
 11:52:30 **25** this verifies it as anthophyllite if you were
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11:52:34 **1** looking at the table, the spacing table. So
11:52:37 **2** then we look at the EDS, the EDS confirms again
11:52:40 **3** the chemistry. So, you know, it's dead to right
11:52:45 **4** anthophyllite.
11:52:46 **5** **Q.** (By Mr. Chachkes) So you're just looking
11:52:47 **6** at -- so I see the spacing here is 21.2?
11:52:50 **7** **A.** Right. Now that's in -- this zone is 101
11:52:54 **8** zone.
11:52:55 **9** **Q.** Okay.
11:52:56 **10** **A.** Okay. That is what it would be in the 101
11:52:58 **11** zone.
11:52:58 **12** **Q.** And you don't have ranges for the 101
11:53:01 **13** zone, do you?
11:53:02 **14** **A.** Well, there are tables for the ranges in
11:53:03 **15** the 101 zone. We don't have one right here --
11:53:07 **16** **Q.** Okay.
11:53:07 **17** **A.** -- but there are table ranges for that.
11:53:09 **18** **Q.** When you say -- so for this table on the
11:53:12 **19** second page of -- the second verification, are you
11:53:16 **20** looking at the 5.05 down at the bottom?
11:53:19 **21** **A.** Yes.
11:53:19 **22** **Q.** Okay. That 5.05 falls within every single
11:53:23 **23** amphibole type in your table as well?
11:53:26 **24** **A.** No, no. It's a combination of the HKO,
11:53:29 **25** the HKL, the zone that you're in what the angle is.
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11:53:32 **1** There are tables for these. You know what I'm
11:53:35 **2** saying? We had talked about that a little bit
11:53:37 **3** before. There are tables for these. And in each one
11:53:41 **4** of the zones there are spacings, spacing tables, and
11:53:45 **5** these fit in the anthophyllite zone.
11:53:48 **6** **Q.** When you say these, do you mean the 101
11:53:51 **7** spacing of 21.2?
11:53:52 **8** **A.** Well, yes.
11:53:53 **9** **Q.** Okay. And that table's not reproduced in
11:53:55 **10** this page; correct?
11:53:56 **11** **A.** No, it's not here.
11:53:57 **12** **Q.** So in the peer-reviewed literature I would
11:53:59 **13** find that a 101 zone spacing of 21.2 will correspond
11:54:09 **14** uniquely to anthophyllite?
11:54:09 **15** **A.** The answer to that is yes.
11:54:11 **16** **Q.** Okay. Can you tell me what peer-reviewed
11:54:13 **17** literature?
11:54:13 **18** **A.** Let's see. There's a large body of card
11:54:19 **19** data, diffraction card data, and again, there are
11:54:22 **20** zone tables in that data, and that's where it comes
11:54:25 **21** from. That's why we do the -- that's why we do the
11:54:29 **22** double verification on anthophyllite, you know,
11:54:30 **23** because it doesn't fit with talc.
11:54:33 **24** **Q.** Can you tell me conclusively whether there
11:54:38 **25** are other minerals that in the zone 101 have spacing
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11:54:47 **1** of 21.2 in that range?
11:54:49 **2** **A.** I can't tell you that as I sit here.
11:54:51 **3** **Q.** Okay. Does the verification -- have you
11:55:04 **4** ever done a verification and the spacing fell outside
11:55:07 **5** the range of what you had already identified?
11:55:09 **6** **A.** I don't know the answer to that.
11:55:10 **7** **Q.** Did that happen for the MDL at all? You
11:55:13 **8** just don't know?
11:55:14 **9** **A.** I don't know.
11:55:14 **10** MS. O'DELL: Object to the form.
11:55:15 **11** THE WITNESS: Yeah, I don't know.
11:55:16 **12** **Q.** (By Mr. Chachkes) If it happened, you
11:55:18 **13** would have reported it; right?
11:55:19 **14** **A.** Well, yes. I would think so, yes.
11:55:21 **15** **Q.** Did you do any of these d-spacing
11:55:30 **16** verifications prior to the first draft, the
11:55:33 **17** November 14 version of your report?
11:55:35 **18** **A.** I --
11:55:36 **19** MS. O'DELL: Feel free to look through it
11:55:37 **20** if you need to. Look at the dates.
11:55:39 **21** THE WITNESS: Let's see what we've got
11:55:40 **22** here. Yeah, it looks like a few. Some of them
11:55:47 **23** were here. Get towards the back. They were
11:55:49 **24** done in October.
11:55:52 **25** It looks like about half of them; half of
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11:55:54 **1** them were done before that first report.
11:55:56 **2** **Q.** (By Mr. Chachkes) Can I conclude because
11:56:00 **3** some were done after and some were done before the
11:56:02 **4** first report, it wasn't material to your findings in
11:56:05 **5** the first report?
11:56:07 **6** MS. O'DELL: Object to the form.
11:56:10 **7** THE WITNESS: Are you saying the ones that
11:56:12 **8** are after that are not material? What's the
11:56:14 **9** question?
11:56:15 **10** **Q.** (By Mr. Chachkes) No.
11:56:15 **11** So clearly before -- at the time of your
11:56:18 **12** first report there were MDL samples on which you had
11:56:23 **13** not done a d-spacing verification; correct?
11:56:25 **14** **A.** No, we did the verification. I mean, we
11:56:28 **15** did -- I mean, you have to understand it was called
11:56:31 **16** at the time based on the data that we had for that
11:56:38 **17** pattern, that chemistry, that morphology.
11:56:40 **18** So again, I would say that they all have
11:56:46 **19** been verified prior to that.
11:56:47 **20** **Q.** Okay. So I want to make sure we're clear
11:56:50 **21** here.
11:56:50 **22** **A.** Sure.
11:56:51 **23** **Q.** So going back to the first verification, I
11:56:54 **24** see -- it says date verified November 19; correct?
11:56:57 **25** **A.** Yes.
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11:56:57 **1** Q. You're saying there was another
 11:56:59 **2** verification prior to November 14?
 11:57:01 **3** A. Sure.
4 Q. And you did --
 11:57:01 **5** A. The actual analysis, when it was actually
 11:57:03 **6** done.
 11:57:03 **7** MR. CHACHKES: Okay. So we would actually
 11:57:06 **8** request that that other data be produced.
 11:57:08 **9** MS. O'DELL: It's been produced.
 11:57:09 **10** THE WITNESS: You already have it. It's
 11:57:10 **11** all in the reports.
 11:57:11 **12** Q. (By Mr. Chachkes) Okay.
 11:57:12 **13** A. Yeah.
 11:57:12 **14** Q. So was there a -- why did you redo it on
 11:57:16 **15** 11/19?
 11:57:17 **16** A. It's just part of our quality control. We
 11:57:20 **17** eventually have to do it as part of quality.
 11:57:22 **18** Q. So every single d-spacing that you did,
 11:57:25 **19** you did twice?
 11:57:26 **20** A. If it was anthophyllite, yeah.
 11:57:28 **21** Q. Okay. So the tremolites were all done --
 11:57:34 **22** so let me just -- I'm looking at a page for tremolite
 11:57:37 **23** where the verification is 11/19.
 11:57:41 **24** A. Okay. I mean, we've got anthophyllites
 11:57:45 **25** that were double-verified before that report also
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11:57:48 **1** that was on 10/31/2018.
 11:57:51 **2** Q. Right.
 11:57:51 **3** A. There are a number of them here in the
 11:57:53 **4** report.
 11:57:53 **5** Q. So --
 11:57:54 **6** A. Numerous.
 11:57:55 **7** Q. You're saying some of the tremolites were
 11:57:57 **8** double-verified?
 11:57:58 **9** MS. O'DELL: Object to the form.
 11:57:59 **10** THE WITNESS: No, I don't think the
 11:58:00 **11** tremolites were. The anthophyllites are.
 11:58:03 **12** Q. (By Mr. Chachkes) Okay.
13 A. Yes.
 11:58:03 **14** Q. I can show you. I just don't have the
 11:58:04 **15** page numbers.
 11:58:05 **16** A. Okay.
 11:58:05 **17** Q. If you look at that one --
18 A. All right.
 11:58:07 **19** Q. -- in the exhibit --
 11:58:09 **20** MS. O'DELL: So let's be clear on the
 11:58:10 **21** record. Is there a sample number --
22 Q. (By Mr. Chachkes) You say the sample
 11:58:12 **23** number. What's the sample number for that one?
 11:58:13 **24** A. M68503-020-002.
 11:58:20 **25** Q. And that was the tremolite; correct?
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11:58:22 **1** A. That was a tremolite, yes.
 11:58:23 **2** Q. And it was verified after the date of the
 11:58:25 **3** first report; correct?
 11:58:26 **4** A. 11/19/2018. What is the date of the first
 11:58:31 **5** report?
 11:58:33 **6** MS. O'DELL: 11/14.
 11:58:33 **7** Q. (By Mr. Chachkes) 11/14.
 11:58:34 **8** A. 14. Okay. Yeah.
 11:58:34 **9** Q. So that was verified after the date of the
 11:58:37 **10** first report; correct?
 11:58:38 **11** A. Uh-huh.
 11:58:38 **12** Q. That means that as of the date of the
 11:58:40 **13** first report it had not been verified?
 11:58:41 **14** MS. O'DELL: Objection to form.
 11:58:43 **15** MS. PARFITT: Objection.
 11:58:44 **16** THE WITNESS: Well, let's back up just a
 11:58:45 **17** second. The actual date of the photo, okay, the
 11:58:48 **18** diffraction photo, was 10/26/2018, okay. So it
 11:58:52 **19** actually was done before that.
 11:58:54 **20** Q. (By Mr. Chachkes) The photo was taken --
 11:58:55 **21** A. The photo was taken, okay, and that's the
 11:58:58 **22** data. The photo is the data. So regardless of this
 11:59:02 **23** right here, all right, that is the pattern, and
 11:59:06 **24** that's what it was.
 11:59:10 **25** Q. You know what I'm talking about; right?
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1 A. Yeah, I know what you mean.
2 Q. The actual --
3 A. I get that.
 11:59:13 **4** MS. O'DELL: Let him finish.
 11:59:13 **5** Q. (By Mr. Chachkes) Let me just finish.
6 A. Okay.
 11:59:14 **7** Q. Taking the photo and turning it into
 11:59:16 **8** useful data in a verification that gives you
 11:59:17 **9** d-spacing, you didn't do that until after the report?
 11:59:19 **10** MS. O'DELL: Object to form.
 11:59:20 **11** THE WITNESS: Well, again, I would have to
 11:59:21 **12** consult with the laboratory to see, you know,
 11:59:25 **13** what actually was done here. But the data
 11:59:27 **14** existed before the report was done.
 11:59:28 **15** Q. (By Mr. Chachkes) That's not my question.
 11:59:29 **16** A. I understand that. But understand that it
 11:59:33 **17** was already verified prior to that or wouldn't have
 11:59:35 **18** ended up in the report as tremolite.
 11:59:37 **19** Q. Was it verified with d-spacing prior to
 11:59:39 **20** the report at 11/14?
 11:59:41 **21** A. I would have to check on that, but to my
 11:59:43 **22** knowledge, it would be, yeah.
 11:59:44 **23** Q. Okay. So this would be a second d-spacing
 11:59:47 **24** calculation that you did for the tremolite?
 11:59:49 **25** MS. O'DELL: Object to the form.
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11:59:50 **1** THE WITNESS: Yes.
11:59:50 **2 Q.** (By Mr. Chachkes) Okay.
11:59:52 **3 A.** Yes.
11:59:52 **4 Q.** When you did the first one -- strike that.
11:59:58 **5 A.** Okay.
11:59:58 **6 Q.** D-spacing's important to determining
12:00:03 **7** whether you're accurately identifying a mineral using
12:00:08 **8** diffraction patterns?
12:00:11 **9** MS. O'DELL: Objection to form.
12:00:12 **10** THE WITNESS: It's part of the standard
12:00:13 **11** methodology.
12:00:14 **12 Q.** (By Mr. Chachkes) Is it an important
12:00:15 **13** part?
12:00:15 **14** MS. O'DELL: Objection to form.
12:00:16 **15** THE WITNESS: Well, I would think that if
12:00:17 **16** you wanted the answer that, again, is it part of
12:00:22 **17** the methodology, a lot of standards use that, so
12:00:25 **18** yes.
12:00:26 **19 Q.** (By Mr. Chachkes) Okay. Your methodology
12:00:29 **20** of -- that you've described today for how you did
12:00:33 **21** SAED -- strike that.
12:00:37 **22 A.** Good.
12:00:37 **23 Q.** Let's look at a specific section from your
12:00:44 **24** report. And so you -- yes.
12:00:53 **25** This is sample M68503-208 -- go slow
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12:01:00 **1** here -- -028. Sorry. It's page 585 of the version
12:01:07 **2** of the January 15 report that was produced to us.
12:01:12 **3** And plaintiffs' counsel --
12:01:13 **4** MS. O'DELL: I didn't catch that number.
12:01:15 **5** Excuse me. What was it?
12:01:16 **6** MR. CHACHKES: It was M68503-028.
12:01:23 **7** MS. O'DELL: What's the page of the
12:01:27 **8** report?
12:01:27 **9** MR. CHACHKES: 585 of the version produced
12:01:27 **10** to us. And you brought us versions separated by
12:01:27 **11** decades, so you can find it in the 1970s
12:01:30 **12** notebook. Okay.
12:01:36 **13 Q.** (By Mr. Chachkes) And let's mark this as
12:01:38 **14** a separate exhibit just so you can have it in front
12:01:40 **15** of you without a huge binder.
12:01:40 **16** MS. O'DELL: It's --
12:01:44 **17** MR. CHACHKES: You want to do it in the
12:01:46 **18** binder? That's fine. If you can locate it, I
12:01:50 **19** don't care.
12:01:50 **20** MS. O'DELL: I just don't want -- if he
12:01:51 **21** needs to look at any other data, I want it to be
12:01:54 **22** available to him. You're welcome to hand him
12:01:55 **23** the exhibit, but I want to find it as well.
12:01:56 **24** MR. CHACHKES: If you're going to find it,
12:01:57 **25** it's just easy enough to do it that way.
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12:02:05 **1** MS. O'DELL: And it's M68503-028?
12:02:10 **2** MR. CHACHKES: -028, correct.
12:02:17 **3** THE WITNESS: What's the decade?
12:02:19 **4 Q.** (By Mr. Chachkes) I'm told the '70s.
12:02:38 **5 A.** Let's see what it says here -- 03 --
12:02:38 **6** MS. O'DELL: Is that it?
12:02:39 **7** THE WITNESS: Should be section 8 -- you
12:02:41 **8** said 028? It should be section -- well, it's
12:02:44 **9** section 8 in ours. I'm not sure what it is in
12:02:47 **10** here.
12:02:50 **11** MS. O'DELL: Here we go.
12:02:51 **12** THE WITNESS: Section 8. Okay. There we
12:03:07 **13** go.
12:03:08 **14 Q.** (By Mr. Chachkes) Okay. Are you there?
12:03:11 **15 A.** Yes.
12:03:11 **16 Q.** Okay. So it's anthophyllite, so you would
12:03:13 **17** expect two diffraction patterns; correct? Can you
12:03:19 **18** see two diffraction patterns?
12:03:21 **19 A.** In this, there may be just one here.
12:03:24 **20** There may be two on the verification, but let's see
12:03:26 **21** if there is. Let's see.
12:03:31 **22** 41391. Yes. There's two of them.
12:03:32 **23 Q.** Why did you say there may be just one?
12:03:34 **24 A.** Oh, well, I was thinking the -- I was
12:03:37 **25** thinking anything else but anthophyllite. But
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12:03:40 **1** they're both here.
12:03:41 **2 Q.** So for anthophyllite you always expect two
12:03:43 **3** patterns in your report; correct?
12:03:45 **4 A.** There should be, yes.
12:03:45 **5 Q.** Okay. Now, looking at these diffraction
12:03:49 **6** patterns, is there -- for this single sample that
12:03:54 **7** we're looking at, can you use just those diffraction
12:03:58 **8** patterns to tell whether or not it's cummingtonite as
12:04:05 **9** an option?
12:04:06 **10** MS. O'DELL: Object to the form.
12:04:21 **11** THE WITNESS: What's the question again?
12:04:23 **12 Q.** (By Mr. Chachkes) So can you tell from
12:04:25 **13** the two diffraction patterns that you have for sample
12:04:28 **14** M68503-028 whether this is anthophyllite versus
12:04:35 **15** cummingtonite, just focusing on the diffraction
12:04:37 **16** patterns?
12:04:38 **17 A.** No.
12:04:38 **18 Q.** And why not?
12:04:39 **19 A.** Well, they can have a similar diffraction
12:04:42 **20** pattern if this looks like -- this looks like an
12:04:47 **21** orthorhombic pattern, just looking at it. So the
12:04:54 **22** cummingtonite is going to have more of a monoclinic
12:04:56 **23** pattern.
12:04:56 **24 Q.** But you answered no. Why did you answer
12:04:58 **25** no?
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12:05:00 **1** A. What --
 12:05:01 **2** Q. You said no to my question.
 12:05:02 **3** A. What was the question again?
 12:05:06 **4** Q. Can you tell whether -- from just the EDS
 12:05:07 **5** patterns whether this is cummingtonite or
 12:05:07 **6** anthophyllite?
 12:05:07 **7** A. Well, again, the answer is still no.
 12:05:16 **8** Q. I'm sorry, let me ask the question again
 12:05:18 **9** because I'm told by my associate that I misspoke.
 12:05:23 **10** Can you tell from the diffraction patterns
 12:05:28 **11** alone for sample M68503-028 whether this is
 12:05:37 **12** anthophyllite or cummingtonite?
 12:05:39 **13** A. I think I just answered that twice.
 12:05:41 **14** Q. Okay. And the answer was no?
 12:05:42 **15** A. Yeah. I mean, it appears to be an
 12:05:44 **16** orthorhombic pattern.
 12:05:47 **17** Q. Okay. What is the definition of
 12:05:53 **18** asbestiform?
 12:05:54 **19** A. Well, it actually means asbestos-like,
 12:05:59 **20** that's what the word means, like asbestos.
 12:06:01 **21** Q. So what is asbestos?
 12:06:03 **22** A. Well, the classic definition of
 12:06:09 **23** asbestiform would be a structure that is 1/2 a micron
 12:06:13 **24** in size with substantially parallel sides. Some
 12:06:18 **25** literature adds the stipulations of tensile strength
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12:06:24 **1** and all of that kind of thing, and most of them,
 12:06:27 **2** those definitions, are sort of on a geological macro
 12:06:31 **3** scale. That's what they're meant to describe.
 12:06:33 **4** Q. Okay. For your purposes, when you use the
 12:06:35 **5** word asbestos or asbestiform in your report, you're
 12:06:38 **6** saying -- are you saying anything more than 1/2 a
 12:06:42 **7** micron in size, substantially parallel sides?
 12:06:45 **8** A. Yes. I mean, it's a regulated definition.
 12:06:51 **9** Q. Yeah, but what I'm asking is if -- is
 12:06:54 **10** there any other qualification in your definition when
 12:06:57 **11** you use the phrase -- the words asbestiform or
 12:07:00 **12** asbestos in your report?
 12:07:01 **13** A. Well, we're going by the -- again, by the
 12:07:04 **14** classic definition of what I just described. Then
 12:07:09 **15** you go in and you do the diffraction, the EDS, and
 12:07:13 **16** the form of it of course -- you know, and then you
 12:07:16 **17** make a decision on that. But as far as, you know,
 12:07:18 **18** using that term, you know, it's mainly based on that
 12:07:22 **19** definition.
 12:07:23 **20** Q. Substantially parallel sides, 1/2 a
 12:07:26 **21** micron?
 12:07:26 **22** A. 1/2 a micron, yeah, yeah.
 12:07:29 **23** Q. Okay. What about aspect ratio, is that
 12:07:30 **24** part of your definition?
 12:07:31 **25** A. Well, again, it depends on the -- some of
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12:07:36 **1** the standards that you look at, the aspect ratio
 12:07:41 **2** is -- if you're talking OSHA, the aspect ratio is
 12:07:44 **3** 3-to-1. If you're talking AHERA, EPA, the aspect
 12:07:48 **4** ratio is 5-to-1. If you're talking ISO, the ratio is
 12:07:53 **5** 5-to-1. If you're talking ASTM, the ratio is 5-to-1.
 12:07:57 **6** So we go by 5-to-1, yeah.
 12:07:59 **7** Q. Am I correct in concluding that every time
 12:08:04 **8** in your expert report you use the word asbestos or
 12:08:06 **9** asbestiform, you're -- among the other qualifications
 12:08:11 **10** you said it's got at least a 5-to-1 ratio?
 12:08:13 **11** A. It should, yes.
 12:08:14 **12** Q. Okay. What about at least a 3-to-1 ratio?
 12:08:16 **13** A. And again, that's an OSHA. We're looking
 12:08:20 **14** at 5-to-1. OSHA will call it at that. They will
 12:08:25 **15** call it asbestos at that ratio.
 12:08:29 **16** So but in all of our reporting we're at
 12:08:33 **17** 5-to-1. So we do see 3-to-1 structures, and as far
 12:08:39 **18** as the body's concerned, it's going to treat the
 12:08:41 **19** 3-to-1 to 5-to-1 probably in the same manner. So
 12:08:46 **20** I've always testified that way. The structures that
 12:08:49 **21** it encounters, regardless of the aspect ratio, have
 12:08:53 **22** to be dealt with in the body.
 12:08:54 **23** Q. For the purposes of your report, did you
 12:08:56 **24** count a 3-to-1 as a fiber, an asbestos fiber?
 12:08:59 **25** A. Not that I'm aware of.
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12:09:02 **1** Q. Okay. Let me show you some testimony from
 12:09:06 **2** Dr. Longo from -- oh. Well, no, let's do this.
 12:09:17 **3** Can we mark this as the next exhibit.
 12:09:37 **4** (Defendants' Exhibit 2 was marked for
 12:09:37 **5** identification.)
 12:09:37 **6** Q. (By Mr. Chachkes) Okay. Can you turn to
 12:09:44 **7** page 3021. This is the deposition -- this is an
 12:09:51 **8** examination of Dr. Longo under oath.
 12:09:55 **9** Can you turn to page 3021? It's the very
 12:09:59 **10** last sheet. I'm going to read you a question and
 12:10:01 **11** answer. You can following along. It starts at
 12:10:04 **12** line 4.
 12:10:05 **13** Line 4, My question to you, Dr. Longo, is
 12:10:07 **14** that transmission electron microscopy cannot tell you
 12:10:11 **15** if you identify a single fiber whether or not that
 12:10:14 **16** particle is asbestiform or nonasbestiform; correct?
 12:10:18 **17** Answer: That is correct.
 12:10:21 **18** Do you agree with that testimony?
 12:10:24 **19** MS. O'DELL: Object to the form.
 12:10:25 **20** THE WITNESS: I don't -- I haven't read
 12:10:27 **21** this, so I don't know what preceded the question
 12:10:30 **22** there. I see what it says. So I don't have an
 12:10:35 **23** opinion on that.
 12:10:35 **24** Q. (By Mr. Chachkes) Okay. Putting aside
 12:10:38 **25** the transcript, I'm just going to ask you the
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12:10:40 **1** question independent of whatever this means in the
 12:10:42 **2** transcript.
 12:10:44 **3** Do you, Dr. Rigler, believe that
 12:10:49 **4** transmission electron microscopy cannot tell you if
 12:10:51 **5** you identify a single fiber whether or not that
 12:10:54 **6** particle is asbestiform or nonasbestiform?
 12:10:56 **7** MS. O'DELL: Object to form.
 12:10:58 **8** THE WITNESS: Again, if they're including
 12:11:05 **9** things like tensile strength, flexibility, that
 12:11:09 **10** type of thing, you can't do that by TEM. So as
 12:11:15 **11** far as the form goes, like asbestos, having a
 12:11:18 **12** form of asbestos which is fibrous, the
 12:11:21 **13** description of it, you definitely can.
 12:11:23 **14** So but again, I don't know what the
 12:11:25 **15** context of this is, so, you know, I don't have
 12:11:30 **16** an opinion on that in reference to this.
 12:11:32 **17** Q. (By Mr. Chachkes) Okay. Have you ever
 12:11:33 **18** known Dr. Longo to use a geologic definition of
 12:11:37 **19** asbestos?
 12:11:37 **20** A. No.
 12:11:38 **21** Q. Okay. And so when he testified that a TEM
 12:11:42 **22** cannot tell you if you identify a single fiber
 12:11:45 **23** whether or not that particle is asbestiform or
 12:11:47 **24** nonasbestiform, you understand that to mean his
 12:11:50 **25** regulatory definition; correct?
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12:11:52 **1** MS. O'DELL: Excuse me. Object to the
 12:11:53 **2** form. Doesn't speak to the context.
 12:11:56 **3** You may answer.
 12:11:57 **4** THE WITNESS: Can you restate?
 12:12:00 **5** MR. CHACHKES: Do you mind reading it
 12:12:02 **6** back.
 12:12:05 **7** (The record was read by the reporter.)
 12:12:44 **8** THE WITNESS: Well, I mean, it would be
 12:12:47 **9** based on the regulatory definition. So, I mean,
 12:12:52 **10** that's all I can say about that.
 12:12:55 **11** Again, I don't know what the context was
 12:12:57 **12** in this. I can't speak for Dr. Longo. So
 12:13:02 **13** that's the best answer I can give.
 12:13:04 **14** Q. (By Mr. Chachkes) Is there any world in
 12:13:05 **15** which it's correct to say that under your regulatory
 12:13:08 **16** definition a TEM cannot tell you if you identify a
 12:13:11 **17** single fiber whether or not that particle is
 12:13:14 **18** asbestiform or nonasbestiform?
 12:13:15 **19** MS. O'DELL: Object to the form.
 12:13:17 **20** THE WITNESS: It's such a broad question
 12:13:22 **21** about that, I don't know quite how to answer it,
 12:13:26 **22** other than the way that I've already answered
 12:13:28 **23** it. Because when you say in any world, I mean,
 12:13:32 **24** it's very broad. Broad question.
 12:13:34 **25** Q. (By Mr. Chachkes) Is there any way that
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12:13:36 **1** could be correct?
 12:13:36 **2** A. I don't know.
 12:13:38 **3** Q. Is there any peer-reviewed literature or
 12:13:41 **4** regulatory material that says that TEM cannot tell
 12:13:47 **5** you if you identify a single fiber whether or not
 12:13:49 **6** that particle is asbestiform or nonasbestiform?
 12:13:52 **7** A. I mean, I can't think of any as I sit
 12:13:56 **8** here. I can't think of any.
 12:13:57 **9** Q. Okay. Is there any regulatory material or
 12:14:00 **10** peer-reviewed material that says the opposite, that
 12:14:03 **11** TEM can tell you that if you identify a single fiber,
 12:14:07 **12** whether or not that particle is asbestiform or
 12:14:09 **13** nonasbestiform?
 12:14:11 **14** MS. O'DELL: Object to the form.
 12:14:13 **15** THE WITNESS: You're saying that it is not
 12:14:24 **16** asbestiform?
 12:14:25 **17** Q. (By Mr. Chachkes) So what I'm saying is,
 12:14:28 **18** is there any peer-reviewed literature or regulatory
 12:14:30 **19** material that confirms that TEM can tell you if you
 12:14:35 **20** identify a single fiber whether or not that particle
 12:14:38 **21** is asbestiform or nonasbestiform?
 12:14:42 **22** A. Well, there are -- yes. I mean, there are
 12:14:45 **23** a number of regulatory documents that say that it
 12:14:48 **24** can.
 12:14:48 **25** Q. Okay. Is 22262 one of those documents?
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12:14:52 **1** A. I would have to -- again, I would want to
 12:14:55 **2** review 22262 again to look at that before I make that
 12:14:59 **3** answer.
 12:14:59 **4** Q. Well, you're using 22262 in this MDL case;
 12:15:04 **5** right?
 12:15:04 **6** A. Yeah. I just need to review it again.
 12:15:06 **7** Q. And you use TEM to identify whether a
 12:15:08 **8** single fiber is or is not asbestiform in this case;
 12:15:11 **9** right?
 12:15:11 **10** MS. O'DELL: Object to the form.
 12:15:12 **11** THE WITNESS: Yes.
 12:15:12 **12** Q. (By Mr. Chachkes) And that was pursuant
 12:15:13 **13** to 22262; correct?
 12:15:15 **14** A. Well, no, it was not just the 22262.
 12:15:18 **15** There were the other methods that were there, too.
 12:15:21 **16** Q. Okay.
 12:15:21 **17** A. Yeah.
 12:15:21 **18** Q. Did you follow the 22262 protocol for TEM?
 12:15:25 **19** A. To my knowledge, we did. And that also
 12:15:31 **20** is -- is also the same type of protocol that is in
 12:15:34 **21** the ASTM and also the EPA methods. So yeah.
 12:15:39 **22** Q. Does 22262 expressly say you can use TEM
 12:15:43 **23** to identify whether or not a particle is asbestiform
 12:15:47 **24** or nonasbestiform?
 12:15:49 **25** A. Again, I would like to review that just to
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12:15:53 **1** be able to verify that it says -- actually says that.
 12:15:58 **2 Q.** You were involved in many more reports
 12:16:19 **3** concerning J&J talc other than the MDL reports;
 12:16:23 **4** right?
 12:16:24 **5** MS. O'DELL: Object to the form.
 12:16:25 **6** THE WITNESS: Some other reports.
 12:16:27 **7 Q.** (By Mr. Chachkes) So those were bottles
 12:16:27 **8** that were not -- those are different bottles, not the
 12:16:29 **9** MDL bottles?
 12:16:30 **10** MS. O'DELL: Object to the form.
 12:16:31 **11** THE WITNESS: They may have been, yes.
 12:16:32 **12 Q.** (By Mr. Chachkes) You didn't issue any
 12:16:34 **13** other reports on the bottles at issue in this case,
 12:16:37 **14** have you?
 12:16:38 **15** MS. O'DELL: Object to the form.
 12:16:39 **16** THE WITNESS: Again, I don't recall.
 12:16:42 **17 Q.** (By Mr. Chachkes) Are you aware that in
 12:16:46 **18** the old reports the majority of particles you
 12:16:50 **19** identified were fibers, and in this MDL the majority
 12:16:53 **20** of particles you identified were bundles; are you
 12:16:56 **21** aware of that?
 12:16:57 **22 A.** I'd have to look back at the reports to
 12:16:59 **23** make that conclusion.
 12:17:01 **24 Q.** Okay. Given that the old reports and the
 12:17:07 **25** new reports are both on J&J bottles, would you expect
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12:17:11 **1** the same fiber-to-bundle ratio in the two separate
 12:17:16 **2** sets of reports?
 12:17:17 **3** MS. O'DELL: Object to form.
 12:17:18 **4** THE WITNESS: Not necessarily.
 12:17:18 **5 Q.** (By Mr. Chachkes) Why not?
 12:17:19 **6 A.** You get variation depending upon where the
 12:17:22 **7** material was mined and combined.
 12:17:25 **8 Q.** For a -- if you isolate a single mine,
 12:17:30 **9** let's say, just Vermont --
 12:17:31 **10 A.** Okay.
 12:17:31 **11 Q.** -- would you expect the old reports, the
 12:17:35 **12** fiber-to-bundle ratio, to match the MDL report?
 12:17:38 **13** MS. O'DELL: Object to the form.
 12:17:39 **14** THE WITNESS: I would expect that they may
 12:17:47 **15** follow the same kinds of trends, you know, as
 12:17:51 **16** far as aspect ratio, that type of thing, yeah.
 12:17:53 **17 Q.** (By Mr. Chachkes) But what about the
 12:17:55 **18** fiber-to-bundle ratio?
 12:17:56 **19 A.** Again, I'd have to look at that. I can't
 12:17:59 **20** make a conclusion on that without looking at it.
 12:18:01 **21 Q.** Okay. So sitting here today you can't
 12:18:05 **22** tell me if you would expect a certain degree of
 12:18:08 **23** reproducibility for the Vermont mine bottles from the
 12:18:12 **24** old reports as compared to the MDL bottles in this
 12:18:14 **25** report?
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12:18:14 **1** MS. O'DELL: Object to the form.
 12:18:16 **2** THE WITNESS: Could you just restate that?
 12:18:27 **3** MR. CHACHKES: Do you mind reading that
 12:18:29 **4** back.
 12:18:29 **5** THE WITNESS: I know she can read it back,
 12:18:31 **6** but can you restate it another way?
 12:18:32 **7 Q.** (By Mr. Chachkes) It's going to be read
 12:18:33 **8** back. Sorry.
 12:18:34 **9** MS. O'DELL: And if you still need that
 12:18:36 **10** question rephrased, you may --
 12:18:37 **11** THE WITNESS: That would be nice.
 12:18:38 **12** MS. O'DELL: You may ask that.
 12:18:40 **13** THE WITNESS: I'd like it to be rephrased.
 12:18:42 **14** MR. CHACHKES: As long as we keep talking,
 12:18:44 **15** she keeps typing.
 12:18:48 **16** (The record was read by the reporter.)
 12:19:12 **17** MS. O'DELL: Object to the form.
 12:19:14 **18** THE WITNESS: Rephrase.
 12:19:15 **19 Q.** (By Mr. Chachkes) Would you expect that
 12:19:18 **20** your fiber-to-bundle ratio for the Vermont samples
 12:19:22 **21** from your old reports would be reproducible in
 12:19:29 **22** analyzing another set of bottles like the set of
 12:19:32 **23** bottles in the MDL?
 12:19:33 **24** MS. O'DELL: Object to the form.
 12:19:36 **25 Q.** (By Mr. Chachkes) From the same mine?
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12:19:37 **1** MS. O'DELL: Object to the form.
 12:19:38 **2** THE WITNESS: You know, I'm not a
 12:19:39 **3** geologist. But once again, the -- you would
 12:19:45 **4** have -- I would expect some variation. I would
 12:19:48 **5** expect some variation.
 12:19:49 **6 Q.** (By Mr. Chachkes) When you say some
 12:19:50 **7** variation, can you quantify?
 12:19:51 **8 A.** No. No. But I would expect because the
 12:19:55 **9** materials out of the ground are, you know --
 12:19:59 **10** depending upon the way they have been mixed, ground,
 12:20:02 **11** mined, all of that, you could have some variation in
 12:20:06 **12** that. Whether they were using a specific kind of
 12:20:09 **13** flotation process at one time versus another, all of
 12:20:12 **14** that kind of thing, you could get some variation.
 12:20:15 **15 Q.** Okay. Is it your position that the
 12:20:19 **16** modified Blount TEM method you employed in your
 12:20:24 **17** March 2018 report is materially identical to ISO
 12:20:28 **18** 22262?
 12:20:29 **19 A.** It is substantially the same.
 12:20:35 **20 Q.** Is it materially the same?
 12:20:36 **21 A.** Substantially the same. If you're saying
 12:20:39 **22** exactly the same, is that what you're asking?
 12:20:41 **23 Q.** Well, let's do that. Is it exactly the
 12:20:44 **24** same?
 12:20:44 **25 A.** Okay. I'd say substantially the same.
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12:20:46 **1** Q. Okay. What degree do they differ?
 12:20:50 **2** What ways do they differ?
 12:20:50 **3** A. There may be some variation, slight
 12:20:52 **4** variation in the densities, the heavy density liquid.
 12:20:55 **5** Q. Any other variation?
 12:20:56 **6** A. I can't think of any right off the bat.
 12:20:59 **7** Q. What's the average width of a tremolite
 12:21:02 **8** fiber under TEM?
 12:21:03 **9** A. That varies depending on the size.
 12:21:05 **10** Q. And when you say depending on the size,
 12:21:09 **11** what do you mean by that?
 12:21:10 **12** A. Well, I mean, it depends. It varies. It
 12:21:12 **13** can be 1/10 of a micron and up.
 12:21:14 **14** Q. So there's no -- in the published
 12:21:21 **15** literature there's no average width of a tremolite
 12:21:22 **16** fiber?
 12:21:23 **17** MS. O'DELL: Object to the form.
 12:21:24 **18** THE WITNESS: Oh, gosh. I don't know.
 12:21:32 **19** There may be. But as far as there being an
 12:21:36 **20** arrange width, again, it depends on how it's
 12:21:38 **21** been mined and milled and processed.
 12:21:41 **22** Q. (By Mr. Chachkes) Is there an average
 12:21:42 **23** width of an anthophyllite fiber under TEM?
 12:21:44 **24** A. Same answer.
 12:21:45 **25** Q. What's the largest width an anthophyllite
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12:21:48 **1** particle can have and still be characterized as a
 12:21:51 **2** fiber under a TEM?
 12:21:52 **3** A. As far -- as long as there are bundled
 12:21:59 **4** fibrils in there, you know, it could be pretty large.
 12:22:03 **5** Q. Well, the question's really what's the
 12:22:05 **6** largest width an anthophyllite particle can have and
 12:22:08 **7** still be characterized as a fiber?
 12:22:10 **8** A. Well, if it has the aspect ratio, it will
 12:22:13 **9** still be -- it can be pretty large. It will still be
 12:22:15 **10** considered as a fiber by TEM.
 12:22:17 **11** Q. Okay. And so you don't have an upper
 12:22:19 **12** boundary by which you'll no longer say that's an
 12:22:23 **13** anthophyllite fiber?
 12:22:25 **14** MS. O'DELL: Object to the form.
 12:22:26 **15** Q. (By Mr. Chachkes) The width, I'm talking
 12:22:27 **16** about.
 12:22:27 **17** A. On a width. Well, again, it's got to meet
 12:22:30 **18** the aspect ratio.
 12:22:31 **19** Q. But any time it meets the aspect ratio, it
 12:22:34 **20** doesn't matter how wide it is, you can still
 12:22:37 **21** characterize it as an anthophyllite particle?
 12:22:38 **22** A. Well, I mean, when you go from the TEM to
 12:22:41 **23** the PLM scale, you're going orders of magnitude in
 12:22:44 **24** size, and these are called fibrils. So, you know,
 12:22:47 **25** they can be pretty darn large.
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12:22:49 **1** Q. What's the largest width a tremolite
 12:22:52 **2** particle can have and still be characterized as a
 12:22:56 **3** fiber under TEM? Same answer?
 12:22:58 **4** A. Yeah.
 12:22:58 **5** Q. Okay. Are all of the fibers that you've
 12:23:05 **6** identified in your reports as asbestos or asbestiform
 12:23:11 **7** formed in the fibrous crystalline habit?
 12:23:14 **8** A. Originally, you know, looking at the
 12:23:18 **9** structures, we get into that question of them being
 12:23:22 **10** formed in a crystalline habit. So that is a growth
 12:23:29 **11** mode for the production of the fibrils; but also, if
 12:23:34 **12** you -- how do you want to say it?
 12:23:41 **13** If massive tremolite, for instance, is
 12:23:46 **14** milled a certain way, it can break in cleavage planes
 12:23:51 **15** that will make it into the fibrils that are, you
 12:23:56 **16** know, regulated type fibrils. Sure, you'll get
 12:23:59 **17** cleavage fragments, ones that appear triangular and,
 12:24:04 **18** you know, different kinds of shapes, but you will
 12:24:06 **19** produce these other kind of fibrils too that will
 12:24:09 **20** meet the definition.
 12:24:10 **21** Q. Okay. So a mineral that has a
 12:24:18 **22** nonregulated and a regulated version can be connected
 12:24:23 **23** in the cleavage plane but can be broken up such that
 12:24:27 **24** it would become in your mind a regulated asbestos
 12:24:29 **25** fiber?
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12:24:30 **1** MS. O'DELL: Object to the form.
 12:24:31 **2** THE WITNESS: Well, this does happen.
 12:24:35 **3** This does happen. And there's a recent
 12:24:40 **4** publication for -- I think it's amosite,
 12:24:45 **5** grunerite, that shows this happens.
 12:24:48 **6** Q. (By Mr. Chachkes) Okay. What's the
 12:24:49 **7** publication you're citing now?
 12:24:50 **8** A. It's a 2019. It's a recent publication.
 12:24:54 **9** Q. Can you tell me the name of it?
 12:24:55 **10** A. It's by Germine and Puffer, I believe it
 12:24:59 **11** is.
 12:25:00 **12** Q. And you don't cite that in your report, do
 12:25:02 **13** you?
 12:25:02 **14** A. Excuse me?
 12:25:03 **15** Q. You don't cite that in your report --
 12:25:04 **16** A. No, no. That's a recent publication.
 12:25:06 **17** Q. And who are Germain and Puffer?
 12:25:09 **18** A. They're a couple of researchers, I
 12:25:11 **19** believe, at UC Cal.
 12:25:12 **20** Q. Do you know who funded their research?
 12:25:15 **21** A. I think the university did.
 12:25:16 **22** Q. Okay. So am I correct in understanding
 12:25:20 **23** your testimony that not everything you've identified
 12:25:23 **24** as asbestos and asbestiform in your report was formed
 12:25:28 **25** in the -- necessarily formed in the crystalline
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12:25:31 **1** habit?
 12:25:31 **2** MS. O'DELL: Object to the form.
 12:25:33 **3** THE WITNESS: Well, again, it's not part
 12:25:34 **4** of the definition, that it be in the crystalline
 12:25:37 **5** habit. The definition has the parameters that
 12:25:40 **6** we discussed already. If it is in that form,
 12:25:45 **7** it's going to be classified like that.
 12:25:48 **8** **Q.** (By Mr. Chachkes) If something is formed
 12:25:53 **9** in the crystalline habit and has an aspect ratio
 12:25:56 **10** under 5-to-1, would you call it regulated asbestos?
 12:25:59 **11** **A.** Well, if it's 3-to-1, OSHA would.
 12:26:02 **12** **Q.** If something was formed in the fibrous
 12:26:04 **13** crystalline habit and was in a 2-to-1 aspect ratio,
 12:26:08 **14** would you call it asbestos?
 12:26:10 **15** **A.** That wouldn't meet the definition.
 12:26:12 **16** **Q.** Okay. Does MAS have a protocol in place
 12:26:18 **17** for describing the dimensions of fibers under a TEM?
 12:26:22 **18** **A.** Yes.
 12:26:22 **19** **Q.** Is it written?
 12:26:24 **20** **A.** Yes, it's in accordance with the standard
 12:26:26 **21** methods, all of these standard methods we've
 12:26:28 **22** discussed.
 12:26:29 **23** **Q.** Okay. So your written protocol for
 12:26:37 **24** identifying what's asbestos or not under a TEM is
 12:26:39 **25** just basically a repeat of the regulations?
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12:26:41 **1** **A.** Yes.
 12:26:42 **2** **Q.** Okay. No change whatsoever --
 12:26:44 **3** **A.** Well, I mean, it's -- it's in accordance
 12:26:49 **4** with the regulation.
 12:26:50 **5** **Q.** Okay. What form is it in? Is it like a
 12:26:55 **6** piece of paper on a wall so TEM scientists can look
 12:26:57 **7** at it? Is it an email? What it is?
 12:26:59 **8** MS. O'DELL: Object to the form.
 12:27:00 **9** THE WITNESS: It's a protocol. We have a
 12:27:02 **10** protocol that the analysts have to abide by.
 12:27:05 **11** **Q.** (By Mr. Chachkes) Just physically, is it
 12:27:07 **12** a piece of paper that analysts memorize --
 12:27:10 **13** **A.** It's a document, yeah.
 12:27:11 **14** **Q.** Okay. Do the analysts have it near
 12:27:13 **15** them --
 12:27:14 **16** **A.** It's a standard operating procedure we
 12:27:16 **17** have.
 12:27:16 **18** **Q.** Okay. So we would ask that that be
 12:27:18 **19** produced.
 12:27:19 **20** Does MAS have a protocol in place for
 12:27:22 **21** describing the dimensions of fibers under TEM, or is
 12:27:26 **22** that the same answer?
 12:27:27 **23** **A.** Same answer.
 12:27:27 **24** **Q.** Same, okay.
 12:27:33 **25** Is there additional data concerning the
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12:27:35 **1** samples you've reported on for TEM that is somewhere
 12:27:39 **2** in your laboratory, like an electronic file that's
 12:27:41 **3** not been produced, not in paper form for us?
 12:27:44 **4** **A.** Not that I know of, no.
 12:27:45 **5** **Q.** Was there any data generated in connection
 12:27:48 **6** with the TEM analysis in this case that was thrown
 12:27:53 **7** away or deleted?
 12:27:54 **8** **A.** No.
 12:27:54 **9** **Q.** I'm moving on to a new topic. It's
 12:27:59 **10** 12:30ish. I'm happy to keep going. It would be a
 12:28:02 **11** good breaking point but --
 12:28:04 **12** **A.** I'm good to go. We can go.
 12:28:06 **13** **Q.** Okay. I mean, we're going to have a lunch
 12:28:08 **14** and we're going to come back, so it's not like we're
 12:28:11 **15** going to finish before lunch.
 12:28:13 **16** **A.** Oh. Oh, well.
 12:28:13 **17** MS. O'DELL: It's up to you, Doctor. If
 12:28:15 **18** you want to go a little longer --
 12:28:16 **19** THE WITNESS: We can take a break if you
 12:28:16 **20** want to take a break.
 12:28:17 **21** MS. PARFITT: It's up to you.
 12:28:18 **22** MS. O'DELL: It's really up to you.
 12:28:21 **23** THE WITNESS: Okay. That's good. Break.
 12:28:22 **24** (Lunch recess from 12:28 p.m. to 1:38 p.m.)
 13:38:49 **25** **Q.** (By Mr. Chachkes) Good afternoon.
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13:39:27 **1** **A.** Good afternoon.
 13:39:27 **2** **Q.** Am I correct that you are not going to
 13:39:30 **3** testify about the PLM results in your report?
 13:39:34 **4** **A.** That's correct.
 13:39:34 **5** **Q.** Okay. I'll skip PLM questioning because
 13:39:38 **6** of that.
 13:39:38 **7** Am I correct that you are not going to
 13:39:40 **8** testify about J3 results in your report?
 13:39:43 **9** **A.** Dr. Longo will testify on that.
 13:39:45 **10** **Q.** Okay. Not you; right?
 13:39:47 **11** **A.** Correct.
 13:39:47 **12** **Q.** Okay. So I'm going to skip questions on
 13:39:50 **13** J3.
 13:39:51 **14** Let me just ask one question, though. Why
 13:39:54 **15** did MAS use J3?
 13:39:57 **16** **A.** MAS used J3 to do XRD analysis. MAS
 13:40:03 **17** doesn't have XRD capabilities.
 13:40:05 **18** **Q.** But they did some other things beyond XRD;
 13:40:08 **19** right?
 13:40:09 **20** **A.** J3?
 13:40:09 **21** **Q.** Yeah.
 13:40:09 **22** **A.** Yes.
 13:40:10 **23** **Q.** Okay. Why did they do those things?
 13:40:13 **24** **A.** To my knowledge, it was to help verify
 13:40:17 **25** results.
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13:40:18 **1** Q. Verify results of things that were
 13:40:20 **2** otherwise being duplicated by MAS?
 13:40:23 **3** A. There may have been some of that, yes.
 13:40:25 **4** Again, if you would ask Dr. Longo about that, please.
 13:40:27 **5** Q. Okay. What's an example of silicate, some
 13:40:32 **6** silicate materials?
 13:40:33 **7** A. Well, a whole group of phyllosilicates are
 13:40:39 **8** clay, clay minerals. There's lots of silicates. I
 13:40:43 **9** mean, the earth's crust is covered with silicates.
 13:40:46 **10** Q. Is talc a silicate?
 13:40:47 **11** A. Yes.
 13:40:47 **12** Q. Are you aware that there's different
 13:40:50 **13** grades of talc?
 13:40:50 **14** A. Yes.
 13:40:51 **15** Q. What are those grades?
 13:40:54 **16** A. Well, they vary by composition, color,
 13:40:57 **17** size, particle size, that type of thing.
 13:40:59 **18** Q. Is talc an asbestiform mineral?
 13:41:05 **19** A. Fibrous talc could be described as an
 13:41:10 **20** asbestiform, yes.
 13:41:11 **21** Q. Are asbestiform minerals silicates?
 13:41:15 **22** A. Yes.
 13:41:16 **23** Q. Do you know how many amphibole mineral
 13:41:23 **24** species there are?
 13:41:24 **25** A. Quite a few.
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13:41:24 **1** Q. Do you have an estimate?
 13:41:25 **2** A. Not right off the top of my head. I bet
 13:41:29 **3** it's many.
 13:41:30 **4** Q. Like more than 10?
 13:41:31 **5** A. Yes.
 13:41:31 **6** Q. More than 30?
 13:41:33 **7** A. Yes.
 13:41:33 **8** Q. When it comes time to give analysts in
 13:41:40 **9** your labs samples of J&J talc to analyze, do you
 13:41:44 **10** distribute them completely randomly?
 13:41:47 **11** MS. O'DELL: Object to the form.
 13:41:48 **12** THE WITNESS: Again, you would have to ask
 13:41:49 **13** Dr. Longo about that. The TEM manager is the
 13:41:54 **14** one who distributes the samples once they come
 13:41:57 **15** in.
 13:41:57 **16** Q. (By Mr. Chachkes) Okay. Would it be
 13:41:59 **17** better to distribute them randomly?
 13:42:01 **18** MS. O'DELL: Object to the form.
 13:42:03 **19** THE WITNESS: Well, I mean, we're going to
 13:42:07 **20** analyze the samples that we receive, so, you
 13:42:11 **21** know, random or not, it wouldn't make any
 13:42:14 **22** difference.
 13:42:14 **23** Q. (By Mr. Chachkes) Would you expect two
 13:42:21 **24** analysts to identify the same asbestos concentration
 13:42:24 **25** from the same bottle of J&J talc?
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13:42:27 **1** A. The answer to that is yes, I would expect
 13:42:35 **2** that.
 13:42:36 **3** Q. And is that empirically what you've been
 13:42:40 **4** seeing?
 13:42:41 **5** MS. O'DELL: Object to the form.
 13:42:42 **6** THE WITNESS: Again, I don't know which
 13:42:44 **7** ones you're referring to here. But from a
 13:42:49 **8** quality standpoint, they do see the same things.
 13:42:52 **9** Q. (By Mr. Chachkes) Okay. If one --
 13:42:54 **10** hypothetically, if one analyst looked at a bottle and
 13:42:57 **11** saw 10,000 fibers per gram and another analyst looked
 13:43:00 **12** at the same bottle and got a nondetect, would that be
 13:43:03 **13** within the margin of error?
 13:43:06 **14** MS. O'DELL: Object to the form.
 13:43:10 **15** THE WITNESS: That would depend on the
 13:43:12 **16** statistics that we were using, whether -- that
 13:43:17 **17** would depend.
 13:43:19 **18** Q. (By Mr. Chachkes) Depend on what?
 13:43:20 **19** A. It would depend on the number of
 13:43:22 **20** structures that they saw.
 13:43:23 **21** Q. Okay. Well, you know how you determine
 13:43:27 **22** structures; correct?
 13:43:28 **23** A. Yes. Yes.
 13:43:28 **24** Q. And you know the number of structures you
 13:43:30 **25** need to extrapolate to 10,000 per gram?
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13:43:33 **1** A. Well, again, that varies. That can vary,
 13:43:39 **2** as I say, depending on what the detection limit is.
 13:43:42 **3** So when you're saying a certain number per gram,
 13:43:48 **4** that's based on it being above a certain detection
 13:43:51 **5** limit. So you may want to ask the question again to
 13:43:55 **6** clarify a little more.
 13:43:55 **7** Q. Well, let's say one analyst analyzed an
 13:44:02 **8** aliquot from a bottle and saw 10 fibers and another
 13:44:05 **9** analyst analyzed an aliquot and didn't detect any
 13:44:08 **10** fibers. Would that be within the margin of error?
 13:44:11 **11** A. No.
 13:44:11 **12** Q. Why not?
 13:44:12 **13** A. That would be outside the margin of error.
 13:44:14 **14** Q. Can you narrow for me what that margin of
 13:44:17 **15** error is?
 13:44:18 **16** A. Well, in our laboratory the coefficient of
 13:44:23 **17** variation between analysts is around I think 5 or
 13:44:27 **18** 7 percent, something like that. So I would expect
 13:44:35 **19** the variation to be not much more than that. Maybe
 13:44:40 **20** 1 fiber difference, something like that, depending
 13:44:42 **21** upon how many fibers they found.
 13:44:44 **22** Q. When you say coefficient of variation,
 13:44:46 **23** you're referring to the coefficient of variation
 13:44:49 **24** study that you all did?
 13:44:49 **25** A. Yes. Yes.
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13:44:50 **1** Q. And were you part of that?
 13:44:51 **2** A. Yes.
 13:44:51 **3** Q. What about would the same coefficient of
 13:45:00 **4** variation apply to the difference in type of asbestos
 13:45:06 **5** that the analysts are finding?
 13:45:08 **6** A. It should. Yes.
 13:45:10 **7** Q. Okay. So you would expect that the ratio
 13:45:12 **8** of tremolite to anthophyllite in a bottle should
 13:45:17 **9** remain relatively constant amongst different analysts
 13:45:20 **10** within 5 to 7 percent?
 13:45:21 **11** A. Yes.
 13:45:21 **12** Q. If the numbers were completely out of
 13:45:29 **13** whack with that, let's say there was 30 percent
 13:45:32 **14** difference, would you believe you need to rerun the
 13:45:35 **15** results, or would you average the two? What would be
 13:45:38 **16** your reaction?
 13:45:39 **17** MS. O'DELL: Object to the form.
 13:45:40 **18** THE WITNESS: Well, if the analysts
 13:45:44 **19** weren't seeing the same thing -- I mean, this is
 13:45:48 **20** the way we run the QC. For instance, if they
 13:45:52 **21** haven't found -- if you put them in the same
 13:45:56 **22** grid square and they haven't found the same
 13:45:59 **23** number of structures there, then you
 13:46:03 **24** typically -- we go back, we look at what was
 13:46:05 **25** there, we sit down with the analyst and try to
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13:46:08 **1** understand why there is a difference like that,
 13:46:11 **2** and then we resolve the difference at that
 13:46:14 **3** point.
 13:46:14 **4** Now, that's the way the process typically
 13:46:17 **5** works.
 13:46:17 **6** Q. (By Mr. Chachkes) Was your coefficient of
 13:46:19 **7** variation study analysts looking at the same grid
 13:46:22 **8** square?
 13:46:22 **9** A. Yes.
 13:46:22 **10** Q. Okay. Let's do it in a completely
 13:46:25 **11** different hypothetical.
 13:46:25 **12** A. All right.
 13:46:26 **13** Q. The two analysts in your lab take aliquots
 13:46:29 **14** out of a bottle that are different, so they end up
 13:46:31 **15** looking at different grid squares.
 13:46:33 **16** A. Yes.
 13:46:33 **17** Q. Would you expect the results to be the
 13:46:35 **18** same?
 13:46:36 **19** MS. O'DELL: Object to the form.
 13:46:37 **20** THE WITNESS: If the sample was
 13:46:41 **21** homogeneous, let's hypothetically say that it is
 13:46:46 **22** completely homogeneous, then, yes, I would
 13:46:48 **23** expect the same kinds of results.
 13:46:50 **24** Q. (By Mr. Chachkes) Do you know whether or
 13:46:51 **25** not bottles are homogeneous, samples are homogeneous?
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13:46:56 **1** A. They should be because they're mixed prior
 13:46:59 **2** to the actual analysis, you know, they're mixed in
 13:47:02 **3** preparation, the sample is.
 13:47:03 **4** Q. Wouldn't you expect greater variation when
 13:47:06 **5** two analysts are looking at their own grids
 13:47:12 **6** separately rather than comparing what they see under
 13:47:15 **7** the same grid?
 13:47:16 **8** MS. O'DELL: Object to the form.
 13:47:17 **9** THE WITNESS: Yeah. That's a good
 13:47:19 **10** question. We're not doing chemistry here.
 13:47:23 **11** We're doing particle analysis. So in chemistry
 13:47:26 **12** where you have something that is in, for
 13:47:29 **13** instance, in solution, it's mixed in solution,
 13:47:31 **14** it's dispersed in that solution by Brownian
 13:47:37 **15** motion forces that keep it very random and
 13:47:39 **16** mixed.
 13:47:40 **17** Wherein a particle solution, if you want
 13:47:44 **18** to call it that, you can have variation based on
 13:47:46 **19** the particle size and a number of factors, but
 13:47:50 **20** the objective is to make the samples as
 13:47:53 **21** homogeneous as possible.
 13:47:54 **22** So you would expect them, if they took a
 13:47:56 **23** sample from the same bottle and they're both
 13:47:58 **24** homogeneous, you should get close to the same
 13:48:01 **25** answer.
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13:48:01 **1** Q. (By Mr. Chachkes) Okay. In your
 13:48:04 **2** experience do two of your analysts looking at the
 13:48:06 **3** same exact grid identify the same bundle-to-fiber
 13:48:11 **4** ratio?
 13:48:12 **5** A. I would say that most of the time they do.
 13:48:18 **6** There may be some slight variations in the size of
 13:48:23 **7** the structure. It will be the same structure because
 13:48:25 **8** you can see it in the images that they make, but they
 13:48:30 **9** may have some slight variation in the size based on
 13:48:33 **10** the microscope that's being used because a couple of
 13:48:37 **11** the scopes we have have slightly different gratitudes
 13:48:42 **12** in the scope so there may be a little difference in
 13:48:45 **13** the length or the width, just a slight amount.
 13:48:47 **14** Q. But generally speaking, you would expect
 13:48:49 **15** two analysts in your laboratory looking at the same
 13:48:51 **16** grid pattern to roughly identify the same
 13:48:55 **17** fiber-to-bundle ratio?
 13:48:56 **18** A. Yes.
 13:48:58 **19** Q. Roughly speaking, you would expect two
 13:49:00 **20** analysts looking at the same grid opening to --
 13:49:08 **21** roughly speaking, you would expect two analysts
 13:49:10 **22** looking at the same grid opening to identify the same
 13:49:14 **23** asbestos type composition, like anthophyllite versus
 13:49:17 **24** tremolite versus no detect?
 13:49:20 **25** A. Yes.
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13:49:20 **1** Q. Okay. And that's based on the coefficient
 13:49:22 **2** of variation study?
 13:49:23 **3** A. Yes, and also their training. So they're
 13:49:27 **4** well versed in this.
 13:49:28 **5** Q. Okay. You wouldn't know whether Lee Poye
6 would expect the same thing?
7 THE REPORTER: I'm sorry, you would or
8 wouldn't?
 13:49:39 **9** Q. (By Mr. Chachkes) You would not expect --
 13:49:40 **10** you would not know whether Lee Poye would say the
 13:49:41 **11** same thing --
12 MS. O'DELL: Object to the form.
 13:49:42 **13** Q. (By Mr. Chachkes) -- is that outside of
 13:49:43 **14** your knowledge?
 13:49:44 **15** MS. O'DELL: Excuse me, I didn't mean to
 13:49:46 **16** interrupt you. Are you finished?
 13:49:48 **17** Object to the form.
 13:49:49 **18** THE WITNESS: All right. Well, as being a
 13:49:54 **19** certified laboratory and having earned
 13:49:57 **20** protocols, I would expect that their analysts
 13:49:59 **21** would find the same kinds of things. There may
 13:50:03 **22** be some variation, but again, you know, there is
 13:50:10 **23** slight variation between laboratories.
 13:50:12 **24** Q. (By Mr. Chachkes) Okay. Did you ever
 13:50:13 **25** quantify the slight variation between laboratories?
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 13:50:16 **1** MS. O'DELL: Object to the form.
 13:50:17 **2** THE WITNESS: In this case, no. We did
 13:50:20 **3** see variation, and that's in the report. But
 13:50:25 **4** again, it doesn't change what has been found.
 13:50:30 **5** There were, I believe, a couple by TEM that we
 13:50:33 **6** weren't able to verify, so, you know, it does
 13:50:35 **7** happen.
 13:50:35 **8** Q. (By Mr. Chachkes) Would you --
 13:50:41 **9** A. But for the most part, we did agree.
 13:50:44 **10** Q. Okay. Let's compare -- let's talk about
 13:50:48 **11** on the one hand the non-MDL samples that you guys
 13:50:52 **12** have analyzed of J&J talc, and on the other hand MDL
 13:50:56 **13** samples of J&J talc.
 13:50:57 **14** Would you expect the results for, let's
 13:51:01 **15** say, 150 tests of the non-MDL samples to look roughly
 13:51:08 **16** like the 150 tests of the MDL samples?
 13:51:13 **17** MS. O'DELL: Objection to form. Without
 13:51:15 **18** limitation on time, et cetera? Product?
 13:51:19 **19** THE WITNESS: It's a hypothetical. But if
 13:51:23 **20** there -- I mean, if they're the same product
 13:51:26 **21** from the same lot, I would expect similar
 13:51:29 **22** results.
 13:51:29 **23** Q. (By Mr. Chachkes) What about without that
 13:51:33 **24** qualification, let's say we know they're from the
 13:51:36 **25** same mine but you know nothing else, would you expect
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13:51:42 **1** the results from the non-MDL samples to look like the
 13:51:46 **2** MDL samples?
 13:51:47 **3** A. I mean, if they're splits of the same
 13:51:51 **4** sample or -- oh, they're different.
 13:51:51 **5** Q. They're different. So you understand that
 13:51:53 **6** the non-MDL samples are literally different bottles
 13:51:56 **7** than the MDL samples?
 13:51:58 **8** A. Yeah. I don't have an opinion on that. I
 13:52:04 **9** don't have an opinion. I'd have to think about that.
 13:52:06 **10** Q. Would you expect the type of asbestos
 13:52:08 **11** found to be roughly the same?
 13:52:11 **12** A. Same answer.
 13:52:12 **13** Q. Okay. No opinion?
 13:52:15 **14** A. Yeah, right.
 13:52:16 **15** Q. If you had an analyst who told you he had
 13:52:24 **16** a nondetect for asbestos in a bottle, a sample from a
 13:52:28 **17** bottle --
 13:52:28 **18** A. Yes.
 13:52:29 **19** Q. -- would you expect another analyst
 13:52:32 **20** separately on a different day analyzing that same
 13:52:35 **21** bottle to get a nondetect?
 13:52:38 **22** A. If the sample was prepared the same way
 13:52:47 **23** and the detection limit was the same, I would expect
 13:52:52 **24** similar results.
 13:52:53 **25** Q. Okay. That goes to the reproducibility of
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 13:52:58 **1** your --
 13:52:59 **2** A. Yeah.
 13:52:59 **3** Q. Okay. When you present -- what's more
 13:53:05 **4** accurate of a representation of what's in a bottle of
 13:53:09 **5** J&J talc, a single analysis or multiple analyses
 13:53:16 **6** separately averaged?
 13:53:18 **7** MS. O'DELL: Object to the form.
 13:53:19 **8** THE WITNESS: Let me put it in terms of
 13:53:28 **9** how FDA does their thing. A laboratory runs a
 13:53:35 **10** study to validate a method. That's the way it's
 13:53:39 **11** done. They will validate the method based on
 13:53:43 **12** accuracy, precision, reproducibility, stability,
 13:53:46 **13** all these different factors.
 13:53:48 **14** And when they're done with that, when
 13:53:51 **15** they're done with that validation study, now
 13:53:53 **16** they have a method that they will use that is
 13:53:56 **17** allowed to use one sample from that to get a
 13:54:00 **18** result. Because they validated their
 13:54:06 **19** methodology and are using a standard
 13:54:07 **20** methodology, that's what's allowed by FDA.
 13:54:11 **21** So I would expect one sample should be
 13:54:12 **22** fine. You can do more, you can average more,
 13:54:16 **23** but the one sample should be representative
 13:54:19 **24** based on the methodology.
 13:54:20 **25** Q. (By Mr. Chachkes) So my question was not
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13:54:22 **1** about adequacy or what follows regulatory methods.
 13:54:28 **2** I'm just saying what would you personally believe to
 13:54:30 **3** be more reliable, a single analysis from a bottle or
 13:54:36 **4** multiple separate analyses from a bottle averaged?
 13:54:39 **5** MS. O'DELL: Object to the form.
 13:54:40 **6** THE WITNESS: I would say the single
 13:54:42 **7** sample based on the methodology that we use that
 13:54:45 **8** has been validated, published. A single sample
 13:54:50 **9** should be fine.
 13:54:51 **10** Q. (By Mr. Chachkes) Do you expect that the
 13:54:52 **11** multiple samples' average would be precisely the
 13:54:55 **12** same?
 13:54:56 **13** A. I don't know about --
 13:54:57 **14** MS. O'DELL: Object to form.
 13:54:58 **15** THE WITNESS: -- precisely the same, but
 13:54:59 **16** they should be very similar.
 13:55:01 **17** Q. (By Mr. Chachkes) But you're not going to
 13:55:02 **18** say that one's better in terms of a more accurate
 13:55:05 **19** representation of what's in the bottle?
 13:55:07 **20** MS. O'DELL: Object to the form.
 13:55:08 **21** THE WITNESS: Well, now you've got an
 13:55:09 **22** average. So you got an average of multiples,
 13:55:13 **23** they should be very similar.
 13:55:14 **24** If you take a single, you should get a
 13:55:17 **25** representative that is close to the average, you
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13:56:04 **1** bottle and someone else presented you, let's say, ten
 13:56:07 **2** different analyses, separate analyses averaged, you
 13:56:10 **3** would say those are equally representative, the
 13:56:13 **4** standard definitions, the margin of error, same for
 13:56:16 **5** both?
 13:56:17 **6** MS. O'DELL: Object to the form.
 13:56:18 **7** THE WITNESS: Well, the ten will give you
 13:56:21 **8** an average with a standard deviation, and if
 13:56:23 **9** that single one falls within that, it's still
 13:56:27 **10** adequate analysis of that and it's still
 13:56:30 **11** acceptable.
 13:56:30 **12** Q. (By Mr. Chachkes) The question is would
 13:56:32 **13** those two examples have the same standard deviations
 13:56:35 **14** and margins of error?
 13:56:37 **15** MS. O'DELL: Object to the form.
 13:56:38 **16** THE WITNESS: Well, they won't. Of
 13:56:39 **17** course, you've got one that's got ten and one
 13:56:41 **18** has one. But I'm going by a method that's been
 13:56:44 **19** validated as accepted as a standard method. You
 13:56:48 **20** should be able to take one sample and it be
 13:56:50 **21** representative, yes.
 13:56:50 **22** Q. (By Mr. Chachkes) When you say they won't
 13:56:51 **23** have the same margin of error, the average of ten
 13:56:54 **24** would have a smaller margin of error; correct?
 13:56:57 **25** A. Not --
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13:55:20 **1** know, within one standard definition of the
 13:55:22 **2** average. So that's what I would expect.
 13:55:24 **3** Q. (By Mr. Chachkes) Okay.
 13:55:25 **4** A. And it's acceptable to have something
 13:55:27 **5** within two to three standard deviations.
 13:55:30 **6** Q. I'm just asking a question about which
 13:55:31 **7** would be more representative of what objectively is
 13:55:34 **8** in the bottle, one analysis or multiple analyses
 13:55:39 **9** averaged, which would be more representative?
 13:55:41 **10** MS. O'DELL: Object to the form.
 13:55:42 **11** THE WITNESS: Well, the single can be
 13:55:43 **12** representative, absolutely.
 13:55:44 **13** Q. (By Mr. Chachkes) And --
 13:55:45 **14** A. I know you're saying more, I get that.
 13:55:47 **15** Q. Yeah.
 13:55:47 **16** A. I understand that.
 13:55:47 **17** Q. Can you answer the question?
 13:55:48 **18** A. Sure.
 13:55:48 **19** Q. Which is more representative?
 13:55:49 **20** A. Which is more representative?
 13:55:51 **21** Q. Yeah.
 13:55:51 **22** A. Any of those three, if there were three of
 13:55:54 **23** them, would be representative. Any of them.
 13:55:55 **24** Q. Okay. So if someone presented you a data
 13:55:59 **25** for one analysis of the asbestos concentration for a
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13:56:57 **1** MS. O'DELL: Object to the form.
 13:56:59 **2** THE WITNESS: -- necessarily. It could.
 13:57:00 **3** It could. Yep.
 13:57:01 **4** Q. (By Mr. Chachkes) Okay. In what instance
 13:57:01 **5** would the ten done by the exact same procedure have a
 13:57:04 **6** larger margin of error when averaged than the one?
 13:57:07 **7** A. Well, the one's not going to -- the one is
 13:57:10 **8** the one. So what I'm saying is the one would fall
 13:57:14 **9** within the group of ten, so it would be
 13:57:16 **10** representative.
 13:57:17 **11** Q. I'm not asking questions about
 13:57:18 **12** representative in any way whatsoever.
 13:57:20 **13** A. I know. I'm trying to answer from a
 13:57:21 **14** scientific point of view.
 13:57:23 **15** Q. Yeah. So if you want to be a scientist
 13:57:25 **16** about it, I would appreciate you under -- like,
 13:57:27 **17** listen to the words I'm saying, okay? I'm talking
 13:57:29 **18** about the standard deviations, not what's
 13:57:32 **19** representative, just the math of standard deviations.
 13:57:34 **20** A. Well, there's no --
 13:57:34 **21** MS. O'DELL: Object --
 13:57:36 **22** THE WITNESS: -- no standard deviation in
 13:57:38 **23** one. So you're trying to compare ten to one and
 13:57:41 **24** say standard deviation, and it's not working.
 13:57:43 **25** Q. (By Mr. Chachkes) Okay. How about
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13:57:43 **1** comparing two averaged and 100 averaged --
 13:57:46 **2 A.** Well, now all of a sudden now we're at two
 13:57:51 **3** and ten instead of one and ten.
 13:57:53 **4 Q.** 100.
 13:57:54 **5 A.** Or 100. Yeah, no, I'm talking about you
 13:57:55 **6** want to know about one, and I'm telling you one is
 13:57:57 **7** representative. That's my opinion.
 13:57:58 **8 Q.** Just asking about standard deviations. Is
 13:58:01 **9** it possible to talk about the math of standard
10 deviations without saying the word representative?
11 MS. O'DELL: Object to the form.
12 THE REPORTER: Wait. I'm sorry, say it
13 again, please.
 13:58:07 **14 Q.** (By Mr. Chachkes) Is it possible to talk
 13:58:08 **15** about the math of standard deviations without using
 13:58:11 **16** the word representative?
 13:58:12 **17** MS. O'DELL: Object to the form.
 13:58:13 **18** THE WITNESS: I'm not quite sure what
 13:58:18 **19** you're getting at.
 13:58:18 **20 Q.** (By Mr. Chachkes) Okay. Every time I ask
 13:58:21 **21** you about standard deviations, you say
 13:58:23 **22** representative. I'm just talking about the math. Do
 13:58:25 **23** you understand that?
 13:58:26 **24 A.** Yeah, but --
 13:58:26 **25** MS. O'DELL: Object to the form.
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13:58:27 **1** THE WITNESS: -- I mean as far as -- I
 13:58:31 **2** mean, if you read back some of what I said, how
 13:58:34 **3** many times did I say representative with that?
 13:58:36 **4** Was it quite a few?
 13:58:37 **5 Q.** (By Mr. Chachkes) It's a bit of a burden
 13:58:39 **6** to put on the reporter.
 13:58:40 **7 A.** I know, but I'm like I don't recall it
 13:58:41 **8** being so much a part of the standard deviation, you
 13:58:44 **9** know, answer.
 13:58:45 **10 Q.** Okay. Let me see if you can answer this
 13:58:46 **11** question without using the words representative or
 13:58:49 **12** what's regulatory or -- just about a question about
 13:58:52 **13** standard deviation. Listen to the question.
 13:58:54 **14** MS. O'DELL: You may answer it any way you
 13:58:56 **15** choose.
 13:58:56 **16** THE WITNESS: I know. I mean, when I say
 13:58:59 **17** representative, I'm talking about that sample
 13:59:01 **18** being representative of the bottle.
 13:59:03 **19 Q.** (By Mr. Chachkes) Okay.
 13:59:04 **20 A.** That's what I'm talking about
 13:59:05 **21** representative. I didn't say it was representative
 13:59:07 **22** about standard deviation.
23 Q. Okay.
 13:59:08 **24 A.** I said it's representative of what is in
 13:59:09 **25** the bottle.
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13:59:10 **1 Q.** This is a new, independent question.
 13:59:12 **2 A.** Okay.
 13:59:12 **3 Q.** And --
 13:59:13 **4 A.** New question.
 13:59:14 **5 Q.** You've got two samples from one -- a
 13:59:19 **6** bottle?
 13:59:19 **7 A.** Yes.
 13:59:19 **8 Q.** Separately analyzed?
 13:59:21 **9 A.** Okay.
 13:59:21 **10 Q.** Average them on one hand?
 13:59:23 **11 A.** Yes.
 13:59:23 **12 Q.** You've got 100 samples from that same
 13:59:25 **13** bottle average -- and separately analyze those and
 13:59:28 **14** average them, which is going to have a higher
 13:59:31 **15** standard deviation?
 13:59:33 **16** MS. O'DELL: Object to the form.
 13:59:34 **17** THE WITNESS: I can't tell you that.
 13:59:35 **18 Q.** (By Mr. Chachkes) Okay. Why can't you
 13:59:36 **19** tell me that?
 13:59:36 **20 A.** Because I don't have the numbers. I don't
 13:59:39 **21** have any numbers to work with.
 13:59:40 **22 Q.** In what world is this hypothetical such
 13:59:44 **23** that the standard deviation is smaller for the two on
 13:59:48 **24** average than the 100 on average?
 13:59:49 **25** MS. O'DELL: Object to the form.
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13:59:50 **1** THE WITNESS: It could be the same.
 13:59:53 **2** Standard deviation could be exactly the same.
 13:59:54 **3 Q.** (By Mr. Chachkes) Okay. Is there any
 13:59:55 **4** situation where the two is going to have a lower
 13:59:57 **5** deviation?
 13:59:57 **6 A.** A lower standard deviation?
 13:59:59 **7 Q.** Right.
 14:00:00 **8 A.** The two have a lower standard deviation?
 14:00:07 **9 Q.** Right.
 14:00:07 **10 A.** Possibly.
11 Q. How?
 14:00:07 **12 A.** Well, it depends on how close the results
 14:00:09 **13** are. The closer they are, the smaller the standard
 14:00:11 **14** deviation.
 14:00:11 **15 Q.** Okay. That's your opinion of how standard
 14:00:13 **16** deviation is calculated?
 14:00:15 **17** MS. O'DELL: Object to the form.
 14:00:15 **18** THE WITNESS: We didn't talk about how
 14:00:17 **19** it's calculated. There's a formula for that.
20 Q. (By Mr. Chachkes) Okay.
 14:00:19 **21 A.** Okay. But the closer the values are to
 14:00:25 **22** each other, the smaller the standard deviation's
 14:00:29 **23** going to be.
 14:00:29 **24 Q.** Did your analysts use the point counting
 14:00:32 **25** method?
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14:00:32 **1** **A.** Are we back to PLM?
 14:00:34 **2** **Q.** Well, there's a point counting method for
 14:00:37 **3** PLM and SEM.
 14:00:38 **4** **A.** Yeah.
 14:00:38 **5** **Q.** So you don't do SEM, right?
 14:00:39 **6** **A.** No.
 14:00:40 **7** **Q.** Okay. All right. I'm going to skip that.
 14:00:42 **8** **A.** No. No. No. Yep, okay.
 14:00:43 **9** **Q.** I'll skip that, that's fine.
 14:00:49 **10** So let's talk about the coefficient of
 14:00:50 **11** variation study. I'm just going to give it to you.
 14:00:52 **12** **A.** Okay.
 14:00:53 **13** **Q.** We will mark it as an exhibit. What's the
 14:00:56 **14** next exhibit? She has to mark it.
15 **A.** Yep.
16 (Defendants' Exhibit 3 was marked for
 14:01:22 **17** identification.)
 14:01:22 **18** **Q.** (By Mr. Chachkes) All right. So is this
 14:01:26 **19** the coefficient of variation study that you referred
 14:01:29 **20** to earlier?
 14:01:30 **21** **A.** Yes.
 14:01:42 **22** **Q.** And that's where you got that 5 to 7
 14:01:45 **23** percent deviation number from?
 14:01:46 **24** **A.** Yes.
 14:01:46 **25** **Q.** Is there a right answer and a wrong answer
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14:01:51 **1** as to whether someone you're looking at visually
 14:01:54 **2** under TEM is a fiber or bundle?
 14:01:56 **3** **MS. O'DELL:** Object to the form.
 14:01:57 **4** **THE WITNESS:** Is a fiber or a bundle a
 14:02:02 **5** right answer or a wrong answer? I would say
 14:02:04 **6** yes.
 14:02:05 **7** **Q.** (By Mr. Chachkes) So is the coefficient
 14:02:10 **8** of variation also -- can we also refer to it as an
 14:02:13 **9** error rate? Is that the same thing?
 14:02:14 **10** **A.** Yes.
 14:02:14 **11** **Q.** And for this coefficient of variation you
 14:02:18 **12** bought off-the-shelf J&J baby powder and added a
 14:02:22 **13** known tremolite asbestos and anthophyllite asbestos
 14:02:24 **14** standard reference material?
 14:02:26 **15** **A.** Yes.
 14:02:27 **16** **Q.** And you spiked the J&J baby powder with
 14:02:31 **17** enough asbestos to reach a concentration of about
 14:02:33 **18** .3 percent?
 14:02:33 **19** **A.** Yes.
 14:02:34 **20** **Q.** And the highest concentration of any
 14:02:35 **21** bottle that you've tested in this case is
 14:02:38 **22** .035 percent; correct?
 14:02:42 **23** **MS. O'DELL:** Object to the form.
 14:02:43 **24** **THE WITNESS:** I would have to check and
 14:02:44 **25** see.
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14:02:44 **1** **Q.** (By Mr. Chachkes) Okay. Do you have --
 14:02:44 **2** just sitting here today, without referring to the
 14:02:46 **3** report, do you have an idea of what the highest
 14:02:48 **4** concentration of any bottle of MDL samples that you
 14:02:51 **5** tested is?
 14:02:52 **6** **MS. O'DELL:** Object to the form.
 14:02:53 **7** **THE WITNESS:** Again, I can't remember off
 14:02:54 **8** the top of my head right now, yeah.
 14:02:55 **9** **Q.** (By Mr. Chachkes) That's fine. It's not
 14:02:57 **10** a memory test.
11 **A.** Yep.
 14:02:58 **12** **Q.** For the coefficient of variation you
 14:03:00 **13** prepared 25 grid openings; correct?
 14:03:02 **14** **A.** Yes.
 14:03:02 **15** **Q.** And then you had four TEM analysts look at
 14:03:06 **16** the exact same grids and analyze them for tremolite
 14:03:09 **17** and anthophyllite asbestos; correct?
 14:03:10 **18** **A.** Yes. Yes.
 14:03:11 **19** **Q.** And so those four analysts were looking at
 14:03:13 **20** the exact same thing?
 14:03:14 **21** **A.** Yes.
 14:03:14 **22** **Q.** And these are the analysts who did the
 14:03:19 **23** testing of the MDL samples?
 14:03:21 **24** **A.** To my knowledge, yes.
 14:03:22 **25** **Q.** Do you consider the error rate that is
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14:03:28 **1** your conclusion in the coefficient of variation study
 14:03:31 **2** to be a good one for a lab?
 14:03:33 **3** **A.** Yes.
 14:03:33 **4** **Q.** Looking specifically at the count sheets
 14:03:37 **5** for tremolite, two of the analysts found nine
 14:03:42 **6** structures in the sample and two found ten
 14:03:44 **7** structures; correct?
 14:03:45 **8** **A.** Yes.
 14:03:45 **9** **Q.** And that's the 6 percent error rate you
 14:03:49 **10** were talking about, the roughly 6 percent error rate?
 14:03:51 **11** **MS. O'DELL:** Object to the form.
 14:03:52 **12** **THE WITNESS:** That's part of the way it's
 14:03:54 **13** calculated, yes.
 14:03:55 **14** **Q.** (By Mr. Chachkes) Okay. What other ways
 14:03:58 **15** was it calculated?
 14:03:59 **16** **A.** That's the way it was calculated according
 14:04:01 **17** to the formula we used.
 14:04:02 **18** **Q.** Okay.
 14:04:03 **19** **A.** Yep.
 14:04:03 **20** **Q.** Your analysts wrote down whether the
 14:04:08 **21** structure they found was a fiber or bundle; right?
 14:04:10 **22** **A.** Yes.
 14:04:11 **23** **Q.** This is a part of the study parameters;
24 right?
 14:04:17 **25** **A.** Yes.
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14:04:17 **1** Q. Let me --
 14:04:22 **2** A. I mean, the rate is based on the number of
 14:04:24 **3** structures that they counted. Now, they may have
 14:04:26 **4** been a fiber or a bundle, but it's the total number
 14:04:29 **5** of structures they counted. Yep.
 14:04:31 **6** MR. CHACHKES: Let's mark as the next
 14:04:32 **7** exhibit, what are we on, 4?
8 (Defendants' Exhibit 4 was marked for
 14:04:52 **9** identification.)
 14:04:52 **10** Q. (By Mr. Chachkes) So what we have marked
 14:04:55 **11** as Rigler 4 is a demonstrative we worked up so that
 14:04:57 **12** we can see -- compare the analysts' work against each
 14:04:59 **13** other.
 14:05:00 **14** Can you just confirm that -- let's look,
 14:05:03 **15** for example, at analyst 1, what they found for grid
 14:05:10 **16** opening A8-E2?
 14:05:16 **17** A. Which analysis is this? Which sample is
 14:05:17 **18** this?
 14:05:18 **19** Q. So this is -- you've gone to the appendix,
 14:05:21 **20** right, of Rigler 3.
 14:05:26 **21** A. What? Where are we --
 14:05:29 **22** Q. So Rigler 3 is the coefficient of
 14:05:32 **23** variation study?
 14:05:33 **24** A. Okay.
 14:05:33 **25** Q. And if you go into -- there are sheets for
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14:05:38 **1** different analysts; right?
 14:05:39 **2** A. Yeah, these are the count sheets, right.
 14:05:41 **3** Q. Right. So if you go to the first analyst
 14:05:48 **4** and you go to A8-E2 --
 14:05:51 **5** A. Okay.
 14:05:51 **6** Q. -- you see that the structure identified
 14:05:53 **7** was a bundle --
 14:05:54 **8** A. Okay.
 14:05:54 **9** Q. -- right?
 14:05:55 **10** A. Yes.
 14:05:56 **11** Q. Okay. And then in my demonstrative you
 14:05:58 **12** see that's a bundle; right?
 14:06:00 **13** A. Right.
 14:06:00 **14** Q. And then you go to analyst number 2 -- is
 14:06:06 **15** that the second page?
 14:06:07 **16** A. Yes.
 14:06:07 **17** Q. Okay. And it says in the upper left-hand
 14:06:09 **18** corner analyst 2?
 14:06:10 **19** A. Yes.
 14:06:10 **20** Q. Okay. That for A8-E2 that analyst
 14:06:16 **21** identified a fiber?
 14:06:17 **22** A. Okay.
 14:06:17 **23** Q. Is that correct?
 14:06:18 **24** A. Uh-huh.
 14:06:19 **25** Q. Okay. And that's reflected in the
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14:06:21 **1** demonstrative?
 14:06:22 **2** A. Yep.
 14:06:22 **3** Q. And analyst number 3, A8-E2, that analyst
 14:06:27 **4** detected a fiber?
 14:06:28 **5** A. Yes.
 14:06:29 **6** Q. Okay. And then analyst number 4, A8-E2,
 14:06:34 **7** that analyst detected a bundle?
 14:06:36 **8** A. Yes. Yep.
 14:06:37 **9** MS. O'DELL: Did you say A8-2 twice?
10 THE WITNESS: This one.
 14:06:41 **11** MR. CHACHKES: A8-E2.
 14:06:43 **12** THE WITNESS: Yeah. Is that grid square?
 14:06:44 **13** MS. O'DELL: Yeah.
14 THE WITNESS: Yeah.
 14:06:45 **15** MS. O'DELL: Got it. And then for --
 14:06:49 **16** Q. (By Mr. Chachkes) Okay. So what we've
 14:06:51 **17** done is we've summarized these grid openings in this
 14:06:55 **18** demonstrative in that way --
19 A. Right.
 14:06:56 **20** Q. -- do you follow me so far?
 14:06:58 **21** A. Yes.
 14:06:58 **22** Q. And your analysts are trained to
 14:07:00 **23** distinguish between a fiber and a bundle; right?
 14:07:02 **24** A. Yes.
 14:07:02 **25** Q. And you ran this experiment to detect how
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14:07:06 **1** good your analysts were at identifying the same
 14:07:09 **2** thing?
 14:07:09 **3** MS. O'DELL: Object to the form.
 14:07:10 **4** Q. (By Mr. Chachkes) Is that a yes?
 14:07:11 **5** A. That would be yes.
 14:07:11 **6** Q. But out of the 11 grid openings, your
 14:07:14 **7** analysts only came to consensus on the type of
 14:07:16 **8** structure they found only once?
 14:07:18 **9** MS. O'DELL: Object to the form.
 14:07:19 **10** THE WITNESS: Every time they came to the
 14:07:20 **11** consensus that it was tremolite.
 14:07:22 **12** Q. (By Mr. Chachkes) This is not the
 14:07:23 **13** question.
 14:07:23 **14** A. But that is the answer. This is what
 14:07:25 **15** we're concerned about here, is it asbestos.
 14:07:27 **16** Q. The question before you is: Out of 11
 14:07:30 **17** grid openings your analysts only came to a consensus
 14:07:33 **18** on the type of structure they found only once?
 14:07:36 **19** A. What's that? Out of 11 grid openings?
 14:07:39 **20** Q. Right.
 14:07:40 **21** A. No.
 14:07:40 **22** Q. Okay. Look at the demonstrative.
23 A. Okay.
 14:07:43 **24** Q. For A8-E2 your analysts did not find the
 14:07:46 **25** same structure; right? Two found bundle, two found
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14:07:52 **1** fiber?
 14:07:52 **2** **A.** Uh-huh.
 14:07:53 **3** **Q.** For A8-E4 they all agree it's a fiber?
 14:07:57 **4** **A.** Uh-huh.
 14:07:57 **5** **Q.** For A8-E5 they did not agree whether it
 14:08:00 **6** was a bundle or fiber.
 14:08:02 **7** **A.** Okay.
 14:08:03 **8** MS. O'DELL: And feel free to check if you
 14:08:05 **9** need to check the data. It's in the
 14:08:08 **10** demonstrative.
 14:08:08 **11** **Q.** (By Mr. Chachkes) Yeah. I mean, if you
 14:08:09 **12** think we're putting a fraudulent --
13 **A.** No --
14 **Q.** -- in front of you --
 14:08:13 **15** **A.** -- no.
 14:08:13 **16** MS. O'DELL: I think mistakes can happen.
17 THE WITNESS: I'm sure they can.
 14:08:15 **18** MS. O'DELL: I think probably the others
 14:08:16 **19** happen, too, but I'm not suggesting that in this
 14:08:18 **20** situation.
 14:08:18 **21** **Q.** (By Mr. Chachkes) So you can see for the
 14:08:20 **22** 11 grid openings on the demonstrative we put before
 14:08:23 **23** you, there was only one instance where the analysts
 14:08:27 **24** agreed on the fiber structure.
 14:08:30 **25** **A.** Okay.
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14:08:31 **1** **Q.** Right?
 14:08:32 **2** **A.** Okay.
 14:08:32 **3** **Q.** And did you -- did you determine an error
 14:08:39 **4** rate for your analysts' ability to determine
 14:08:42 **5** morphology?
 14:08:43 **6** **A.** No.
 14:08:44 **7** **Q.** If you did based on this, it would be a
 14:08:47 **8** pretty high error rate, wouldn't it?
 14:08:49 **9** MS. O'DELL: Object to the form.
 14:08:50 **10** THE WITNESS: Well, it's not an error as
 14:08:51 **11** to what the material is, is it? It's all
 14:08:53 **12** tremolite. It's all tremolite asbestos. It all
 14:08:56 **13** meets the definition for tremolite asbestos,
 14:08:57 **14** bundle, fiber.
 14:08:59 **15** **Q.** (By Mr. Chachkes) I'll ask the question
 14:09:00 **16** again.
 14:09:00 **17** **A.** Okay.
 14:09:00 **18** **Q.** If you were to determine an error rate for
 14:09:03 **19** determining the morphology of what the analysts in
 14:09:06 **20** the coefficient of variation were looking at, it
 14:09:09 **21** would be a very high error rate, wouldn't it?
 14:09:11 **22** MS. O'DELL: Object to the form.
 14:09:12 **23** THE WITNESS: No. No, it wouldn't.
 14:09:12 **24** **Q.** (By Mr. Chachkes) Even though they only
 14:09:13 **25** agreed once out of 11 times?
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14:09:15 **1** MS. O'DELL: Object to the form.
 14:09:16 **2** THE WITNESS: No.
 14:09:16 **3** **Q.** (By Mr. Chachkes) Why?
 14:09:17 **4** **A.** It's not.
 14:09:18 **5** **Q.** Why?
 14:09:18 **6** **A.** Well, the max I can see here is it might
 14:09:23 **7** be -- it might be maybe 50 percent, maybe, if that's
 14:09:28 **8** what it is.
 14:09:28 **9** **Q.** Okay.
 14:09:29 **10** **A.** And I don't agree with it, okay, because
 14:09:32 **11** the objective here is is it asbestos? Is it
 14:09:35 **12** asbestiform asbestos? The answer is yes.
 14:09:37 **13** **Q.** So a 50 percent error rate in your mind is
 14:09:39 **14** not high?
 14:09:40 **15** MS. O'DELL: Object to the form.
 14:09:41 **16** THE WITNESS: No, this is not --
 14:09:43 **17** MS. O'DELL: Give me a moment.
 14:09:45 **18** Object to the form.
 14:09:46 **19** Go ahead.
 14:09:46 **20** THE WITNESS: I mean, again, the objective
 14:09:48 **21** here is to determine if this is asbestos, is
 14:09:51 **22** this asbestiform. And the answer to that is
 14:09:54 **23** yes. You're going to have some variation based
 14:09:56 **24** on what they see in the microscope, all right,
 14:10:01 **25** and that is totally acceptable.
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14:10:03 **1** **Q.** (By Mr. Chachkes) Okay. When you say
 14:10:05 **2** totally acceptable, what do you mean by that?
 14:10:06 **3** **A.** Well, it's acceptable based on what the
 14:10:13 **4** asbestiform is, according to the definition. All
 14:10:16 **5** right. Fiber, bundle, .5 or greater, 5-to-1 aspect
 14:10:22 **6** ratio. Every one of these fits that.
 14:10:24 **7** **Q.** So -- well, that's not quite correct;
 14:10:28 **8** right? A8-G4, three analysts found no detectable
 14:10:34 **9** asbestos and only one found asbestos; right?
 14:10:36 **10** **A.** That happens.
11 **Q.** Okay.
 14:10:36 **12** **A.** That can happen.
 14:10:37 **13** **Q.** And then A8-G5, three analysts found no
 14:10:41 **14** asbestos and one identified a bundle?
 14:10:43 **15** **A.** Again, that can happen.
 14:10:45 **16** **Q.** And you testified before that there's a
 14:10:49 **17** right answer and a wrong answer as to whether
 14:10:52 **18** something's a fiber or a bundle; right?
 14:10:54 **19** **A.** Yes.
 14:10:54 **20** **Q.** Do you know for grid opening A8-E4 which
 14:10:59 **21** analyst got it wrong and which analyst got it right?
 14:11:01 **22** MS. O'DELL: Object to the form.
 14:11:02 **23** THE WITNESS: They both got it right.
 14:11:04 **24** They all got it right.
 14:11:05 **25** **Q.** (By Mr. Chachkes) Okay. And so if
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14:11:08 **1** there's objectively a right answer to whether it's a
 14:11:11 **2** fiber or bundle, how can something be both a fiber
 14:11:14 **3** and a bundle?
 14:11:15 **4** **A.** As I say, the analyst, their job is to
 14:11:22 **5** figure out whether it meets the definition, all
 14:11:24 **6** right? Fiber or bundle, it meets the specification
 14:11:28 **7** for whether it is asbestos, asbestiform asbestos.
 14:11:33 **8** **Q.** Okay. Putting --
 14:11:34 **9** **A.** That's what we're concerned about here.
 14:11:36 **10** **Q.** Putting aside whether there's -- what they
 14:11:38 **11** identified as asbestiform, I'm just talking about the
 14:11:41 **12** morphology.
 14:11:41 **13** **A.** Sure.
 14:11:42 **14** **Q.** For A8-E2, two analysts must have gotten
 14:11:46 **15** it wrong and two must have gotten it right.
 14:11:48 **16** **MS. O'DELL:** Object to the form.
 14:11:49 **17** **THE WITNESS:** No. They all got it right.
 14:11:50 **18** **Q.** (By Mr. Chachkes) Okay. So you don't
 14:11:50 **19** care whether an analyst correctly identifies
 14:11:54 **20** something as a bundle or fiber?
 14:11:56 **21** **MS. O'DELL:** Object to the form.
 14:11:56 **22** **MS. PARFITT:** Misstates his testimony.
 14:11:59 **23** **THE WITNESS:** What I've said is it meets
 14:12:00 **24** the definition. That's what is of concern to
 14:12:03 **25** me. That's the most important part.
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14:12:39 **1** your question.
 14:12:39 **2** **THE WITNESS:** Numerous times.
 14:12:41 **3** **MS. O'DELL:** Excuse me. Three or four
 14:12:42 **4** times. If you want to waste your time, but
 14:12:45 **5** don't badger the witness.
 14:12:46 **6** **MR. CHACHKES:** I'm not going to badger the
 14:12:50 **7** witness --
 14:12:50 **8** **MS. O'DELL:** You are badgering the
 14:12:50 **9** witness.
 14:12:50 **10** **MR. CHACHKES:** -- clear answer.
 14:12:50 **11** **MS. O'DELL:** He's answered your question
 14:12:51 **12** very clearly.
 14:12:52 **13** **MR. CHACHKES:** I'm going to ask the same
 14:12:53 **14** question again. You can tell me I'm not allowed
 14:12:56 **15** to, and I'll move on.
 14:12:56 **16** **MS. O'DELL:** I'm telling you that the
 14:12:56 **17** rules require that you not badger the witness.
 14:12:56 **18** That's what I'm stating to you.
 14:13:01 **19** **MR. CHACHKES:** I'm -- level voice. It's a
 14:13:02 **20** calm question. It's a serious question. So.
 14:13:04 **21** **MS. O'DELL:** That doesn't mean you're not
 14:13:08 **22** badgering the witness, as you are well aware.
 14:13:09 **23** **MR. CHACHKES:** I believe I'm entitled to a
 14:13:11 **24** clear answer to a clear question.
 14:13:13 **25** **MS. O'DELL:** You're not entitled to the
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14:12:04 **1** **Q.** (By Mr. Chachkes) The question is do you
 14:12:06 **2** care whether one of your analysts misidentifies a
 14:12:09 **3** bundle as a fiber or a fiber as a bundle?
 14:12:11 **4** **MS. O'DELL:** Object to the form.
 14:12:13 **5** **Q.** (By Mr. Chachkes) Do you care?
 14:12:14 **6** **MS. O'DELL:** Object to the form.
 14:12:15 **7** **THE WITNESS:** I care if they identify it
 14:12:19 **8** properly according to the regulations, and in
 14:12:22 **9** all cases they have.
 14:12:23 **10** **Q.** (By Mr. Chachkes) I'll ask the same
 14:12:24 **11** question again.
 14:12:24 **12** **A.** And I'll answer it the same way every
 14:12:26 **13** time.
 14:12:26 **14** **Q.** We'll add this to the list of things we're
 14:12:28 **15** going to get the magistrate to --
 14:12:28 **16** **A.** Fine.
 14:12:30 **17** **Q.** -- answer.
 14:12:30 **18** **A.** That's fine.
 14:12:30 **19** **Q.** Do you care --
 14:12:31 **20** **A.** I'm going to answer it the same way, so we
 14:12:33 **21** can move on.
 14:12:34 **22** **Q.** I want a clear record. If you don't want
 14:12:36 **23** to answer -- do you care --
 14:12:37 **24** **A.** I've answered already.
 14:12:37 **25** **MS. O'DELL:** Excuse me. He's answered
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14:13:13 **1** answer that you want. You're entitled to an
 14:13:13 **2** answer, and he's answered your question.
 14:13:13 **3** **MR. CHACHKES:** Let's maybe -- I don't
 14:13:13 **4** think this colloquy is productive. I'm going to
 14:13:19 **5** ask the same question again. If you want to say
 14:13:19 **6** don't ask it, you can order me not to ask it.
 14:13:22 **7** I'm going to ask it again.
 14:13:23 **8** **Q.** (By Mr. Chachkes) Do you care whether
 14:13:24 **9** your analysts misidentify a bundle as a fiber or a
 14:13:28 **10** fiber as a bundle? Just the morphology I'm talking
 14:13:30 **11** about.
 14:13:31 **12** **A.** Asked and answered.
 14:13:32 **13** **MS. O'DELL:** Excuse me. Object to the
 14:13:33 **14** form.
 14:13:34 **15** **Q.** (By Mr. Chachkes) So you believe you've
 14:13:37 **16** already answered that?
 14:13:37 **17** **A.** Yes.
 14:13:38 **18** **Q.** Okay. And if I were to say you don't care
 14:13:41 **19** about whether an analyst is misidentifying a
 14:13:44 **20** morphology, would I be wrong or right?
 14:13:46 **21** **MS. O'DELL:** You would be misstating his
 14:13:48 **22** testimony. Object to the question.
 14:13:49 **23** **Q.** (By Mr. Chachkes) If I said you do care
 14:13:52 **24** that an analyst misidentified the morphology of
 14:13:56 **25** asbestos, would I be wrong or right?
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14:13:57 **1** MS. O'DELL: Object to the form. He's
 14:13:59 **2** answered your question.
 14:13:59 **3** THE WITNESS: I've already answered the
 14:14:01 **4** question.
 14:14:01 **5** MR. CHACHKES: Okay. We're going to add
 14:14:03 **6** that to the list of questions for the
 14:14:04 **7** magistrate.
 14:14:09 **8** Q. (By Mr. Chachkes) Does whether you
 14:14:12 **9** identify something as a bundle or a fiber affect the
 14:14:15 **10** concentration values in your report?
 14:14:19 **11** A. No.
 14:14:19 **12** Q. Not at all?
 14:14:24 **13** A. No.
 14:14:24 **14** Q. Does the Rigler 4 demonstrative which is
 14:14:32 **15** derived from your coefficient of variation study lead
 14:14:36 **16** you to believe that maybe the TEM is not the best
 14:14:39 **17** apparatus for resolving morphology?
 14:14:41 **18** A. No.
 14:14:42 **19** MS. O'DELL: Object to the form.
 14:14:43 **20** THE WITNESS: It is the best.
 14:14:45 **21** Q. (By Mr. Chachkes) No evidence will shake
 14:14:46 **22** you from that opinion?
 14:14:47 **23** A. No.
 14:14:47 **24** Q. Okay. Let's talk about asbestos. Ready?
 14:14:56 **25** A. I thought that's what we've been talking
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14:14:58 **1** about.
 14:14:58 **2** Q. Completely different topic.
 14:14:59 **3** A. All right.
 14:15:00 **4** Q. You talk about the Blount paper in your
 14:15:02 **5** expert report; correct?
 14:15:04 **6** A. Yes.
 14:15:04 **7** Q. Okay. In the Blount paper there's a
 14:15:06 **8** particle size distribution?
 14:15:09 **9** A. Yes.
 14:15:09 **10** Q. Okay. And out in the published literature
 14:15:16 **11** there are publications that have particle sized
 14:15:21 **12** distributions that -- strike that.
 14:15:25 **13** That there's a characteristic -- there is
 14:15:27 **14** a characteristic particle size distribution for
 14:15:30 **15** asbestos; is that correct?
 14:15:31 **16** A. Well, depending on how that sample's been
 14:15:43 **17** processed, you're going to have different fiber
 14:15:45 **18** sizes, different -- they're going to be different.
 14:15:48 **19** You're going to have different aspect ratios and
 14:15:51 **20** different sizes.
 14:15:51 **21** Q. For any given sample that everyone agrees
 14:15:56 **22** is asbestos, it's going to have a characteristic
 14:15:59 **23** particle size distribution; right?
 14:16:00 **24** MS. O'DELL: Object to the form.
 14:16:01 **25** THE WITNESS: It can.
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14:16:02 **1** Q. (By Mr. Chachkes) Okay. Meaning some
 14:16:06 **2** of -- strike that.
 14:16:06 **3** Does a -- you understand what a cleavage
 14:16:10 **4** fragment is?
 14:16:11 **5** A. Yes.
 14:16:11 **6** Q. Would you call a cleavage fragment
 14:16:13 **7** asbestos?
 14:16:13 **8** A. If it was of the size and shape that met
 14:16:16 **9** the regulatory definition, yes.
 14:16:18 **10** Q. Do cleavage fragments have a different
 14:16:21 **11** particle size distribution than asbestos?
 14:16:26 **12** MS. O'DELL: Object on the form.
 14:16:27 **13** THE WITNESS: They can.
 14:16:29 **14** Q. (By Mr. Chachkes) Okay. Using -- when I
 14:16:31 **15** say geological definition, I've heard you guys talk
 14:16:34 **16** about --
 14:16:34 **17** A. Yes.
 14:16:34 **18** Q. -- I'm going to use your phrase geological
 14:16:37 **19** definition of asbestos.
 14:16:39 **20** A. All right.
 14:16:39 **21** Q. Using a geological definition of asbestos,
 14:16:42 **22** can you have a cleavage fragment that is greater than
 14:16:46 **23** 5-to-1 aspect ratio?
 14:16:48 **24** MS. O'DELL: Object to the form.
 14:16:49 **25** THE WITNESS: In my opinion, the answer to
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14:16:52 **1** that is yes.
 14:16:53 **2** Q. (By Mr. Chachkes) Okay. And using the
 14:16:56 **3** geological definition of asbestos as you have used
 14:17:02 **4** it, there can be an asbestiform particle that has an
 14:17:06 **5** aspect ratio of below 3-to-1?
 14:17:08 **6** MS. O'DELL: Object to the form.
 14:17:10 **7** THE WITNESS: Are you talking about what
 14:17:13 **8** kind of particle?
 14:17:14 **9** Q. (By Mr. Chachkes) Asbestiform particle.
 14:17:15 **10** A. Smaller than 3-to-1?
 14:17:17 **11** Q. Yeah.
 14:17:17 **12** A. I mean, from a regulatory standpoint, it
 14:17:22 **13** would be 3-to-1, 5-to-1. So --
 14:17:27 **14** Q. Yeah. I don't want to interrupt.
 14:17:29 **15** So for just a geological definition as
 14:17:31 **16** you've -- as --
 14:17:34 **17** A. Yeah.
 14:17:34 **18** Q. It's just a geological definition as you
 14:17:39 **19** have used that phrase, can there be, under the
 14:17:42 **20** geological definition, asbestos with an aspect ratio
 14:17:45 **21** below 3-to-1?
 14:17:46 **22** MS. O'DELL: Object to the form.
 14:17:47 **23** THE WITNESS: Well, the geological
 14:17:51 **24** definition that we've talked about has to do
 14:17:54 **25** with macro, large, very large that you can hold
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14:17:58 **1** in your hand kinds of particles. So in most
 14:18:03 **2** cases of that size, you know, you may see some
 14:18:08 **3** that are in that range, but you have to use the
 14:18:09 **4** PLM to see them, probably.
 14:18:11 **5** **Q.** (By Mr. Chachkes) Okay. If I took, under
 14:18:14 **6** the geological definition, a tremolite particle that
 14:18:17 **7** had a 6-to-1 aspect ratio and I snapped it into two
 14:18:21 **8** 3-to-1 aspect ratio particles, under the geological
 14:18:24 **9** definition those two particles would still be
 14:18:27 **10** asbestos; right?
 14:18:28 **11** **A.** Yes. I mean, if they were -- yeah. They
 14:18:32 **12** were on a -- yes, they would be.
 14:18:34 **13** **Q.** Let me ask it --
 14:18:35 **14** **A.** If they were equally divided.
 14:18:36 **15** **Q.** Yeah. Let me just ask a better question
 14:18:38 **16** to be fair.
 14:18:39 **17** If I had a tremolite particle that was --
 14:18:42 **18** that had a 6-to-1 aspect ratio and I snapped it into
 14:18:46 **19** three parts perfectly evenly so that each had a
 14:18:50 **20** 2-to-1 aspect ratio, under the geological definition
 14:18:53 **21** each of those would still be asbestos; right?
 14:18:54 **22** **MS. O'DELL:** Object to the form.
 14:18:56 **23** **THE WITNESS:** On a microscopic scale they
 14:18:58 **24** wouldn't be. I mean, they wouldn't fit the
 14:19:00 **25** regulatory definition.
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14:19:00 **1** **Q.** (By Mr. Chachkes) I'm talking about the
 14:19:01 **2** geological.
 14:19:02 **3** **A.** I mean --
 14:19:08 **4** **MS. O'DELL:** Object to the form.
 14:19:09 **5** **THE WITNESS:** Yeah, I don't -- I mean, I
 14:19:11 **6** think on a microscale versus, you know, what I
 14:19:14 **7** can see in my hand. See what I'm saying?
 14:19:17 **8** **Q.** (By Mr. Chachkes) No.
 14:19:18 **9** **A.** Yeah. Well, that's how I feel about the
 14:19:22 **10** question you just asked me. I'm not quite sure of
 14:19:24 **11** exactly -- I mean, I understand what the concept is,
 14:19:28 **12** but when you're saying on a geological scale, I mean,
 14:19:32 **13** if the aspect ratio is less than 3-to-1, it wouldn't
 14:19:35 **14** come under the regulatory definition.
 14:19:37 **15** **Q.** Right. But I'm not asking about
 14:19:38 **16** regulatory.
 14:19:39 **17** **A.** Well, that's where I am with it.
 14:19:41 **18** **Q.** Right.
 14:19:43 **19** **A.** I mean, if you're going to say it's
 14:19:45 **20** asbestiform, it's got to have that ratio. It's got
 14:19:50 **21** to have at least a 5-to-1 ratio.
 14:19:52 **22** **Q.** So if I have a chunk of gold and I break
 14:19:54 **23** it in half, each half would still be gold; right?
 14:19:57 **24** **A.** Yeah.
 14:19:57 **25** **Q.** If I break those two halves again, each
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14:20:00 **1** part would still be gold?
 14:20:01 **2** **A.** Correct.
 14:20:01 **3** **Q.** And I can keep going doing that until I
 14:20:05 **4** had very small pieces and they still would be gold?
 14:20:07 **5** **A.** Sure.
 14:20:08 **6** **Q.** You're saying the same does not apply to
 14:20:10 **7** asbestos, that I could break asbestos and at a
 14:20:11 **8** certain point it's not asbestos?
 14:20:11 **9** **MS. O'DELL:** Object to the form.
 14:20:12 **10** **THE WITNESS:** Well, I mean, chemically it
 14:20:15 **11** still is. Yes.
 14:20:17 **12** **Q.** (By Mr. Chachkes) Okay. You use -- so I
 14:20:26 **13** didn't see the phrase asbestiform talc in your
 14:20:28 **14** report; is that correct?
 14:20:30 **15** **A.** I don't -- it might be in there, yeah, I
 14:20:33 **16** think it is. Yeah.
 14:20:34 **17** **Q.** Okay. In your report at page 8 you talk
 14:20:37 **18** about fibrous talc, you found fibrous talc in
 14:20:42 **19** 98 percent of the Italian and Vermont talc samples by
 14:20:45 **20** ISO 22262. Does that ring a bell?
 14:20:48 **21** **A.** Yes.
 14:20:48 **22** **Q.** What is your definition of fibrous talc?
 14:20:50 **23** **A.** It would be talc that had that aspect
 14:20:52 **24** ratio of 5-to-1.
 14:20:53 **25** **Q.** You would require parallel sides as well?
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14:20:56 **1** **A.** Yes.
 14:20:56 **2** **Q.** Is there a scientific consensus that there
 14:21:01 **3** is such a thing as fibrous talc?
 14:21:02 **4** **A.** Yes.
 14:21:02 **5** **Q.** Are you aware of any epidemiologist or
 14:21:07 **6** doctor who has studied the health effects of fibrous
 14:21:09 **7** talc?
 14:21:10 **8** **MS. O'DELL:** Object to the form.
 14:21:11 **9** **THE WITNESS:** Well, if the talc -- if
 14:21:18 **10** there's fibrous talc in with -- let's just say
 14:21:22 **11** we called it talc, whether it's got a fibrous
 14:21:24 **12** component or not, platy, you know, mostly platy.
 14:21:30 **13** As far as IARC is concerned, they say that that
 14:21:35 **14** is -- that will be -- if it has asbestos in it,
 14:21:38 **15** it's going to be regulated and hazardous to
 14:21:44 **16** health.
 14:21:44 **17** **Q.** (By Mr. Chachkes) The question was are
 14:21:45 **18** you aware of any epidemiologist or doctor who has
 14:21:48 **19** studied the health effects of fibrous talc?
 14:21:51 **20** **MS. O'DELL:** Object to the form.
 14:21:53 **21** **Q.** (By Mr. Chachkes) It's a yes or no
 14:21:54 **22** question.
 14:21:54 **23** **A.** Yes, there have been numerous studies on
 14:21:59 **24** fibrous talc, and I don't know if they're in some of
 14:22:04 **25** our reference material or not, but there have been
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14:22:05 **1** numerous studies that have been done.
 14:22:07 **2 Q.** Can you name a single doctor or
 14:22:09 **3** epidemiologist who has done a study on the health
 14:22:11 **4** effects of fibrous talc --
 14:22:13 **5** MS. O'DELL: Object to the form --
 14:22:14 **6** THE WITNESS: Are you talking about
 14:22:15 **7** medical doctors, Ph.D.s, what? You said doctor.
 14:22:18 **8 Q.** (By Mr. Chachkes) Let's say medical
 14:22:20 **9** doctor.
 14:22:20 **10 A.** Yeah, let's say doctors like you said
 14:22:22 **11** before, then yes, there are.
 14:22:23 **12 Q.** Okay. Start with medical doctors.
 14:22:25 **13 A.** Okay.
 14:22:30 **14 Q.** Can you name a medical doctor who has
 14:22:30 **15** studied the health effects of fibrous talc?
 14:22:30 **16 A.** There are --
 14:22:31 **17** MS. O'DELL: Object to the form.
 14:22:31 **18** THE WITNESS: I can't name one right now
 14:22:35 **19** as I sit here, but there are that have done
 14:22:36 **20** those studies.
 14:22:37 **21 Q.** (By Mr. Chachkes) Can you name an
 14:22:38 **22** epidemiologist?
 14:22:39 **23** MS. O'DELL: Object to the form.
 14:22:40 **24** THE WITNESS: There are ones that have.
 14:22:41 **25 Q.** (By Mr. Chachkes) Can you name one?
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14:22:42 **1 A.** No, not as I sit here right here.
 14:22:44 **2 Q.** Can you name just a general doctor who has
 14:22:46 **3** studied the health effects of fibrous talc?
 14:22:49 **4** MS. O'DELL: Object to the form.
 14:22:49 **5** THE WITNESS: It's the same answer to the
 14:22:51 **6** question. Doctor, doctor.
 14:22:52 **7 Q.** (By Mr. Chachkes) Okay. Well, there's
 14:22:53 **8** medical doctor and regular -- and other -- like
9 you're a doctor --
10 A. Well --
11 THE REPORTER: Wait. Wait.
 14:22:58 **12** THE WITNESS: I know, but we said doctors.
 14:23:02 **13 Q.** (By Mr. Chachkes) But sitting here today
 14:23:03 **14** you can't name just a Ph.D. who has studied -- just
 14:23:06 **15** by name -- a Ph.D. who has studied the health effects
 14:23:09 **16** of fibrous talc -- exposure to fibrous talc?
 14:23:10 **17** MS. O'DELL: Object to form.
 14:23:12 **18** THE WITNESS: As I sit right here, I can't
 14:23:14 **19** name them, but they do exist. I have reference
 14:23:17 **20** material and I'd be happy to get that for you.
 14:23:20 **21 Q.** (By Mr. Chachkes) Can you identify --
 14:23:21 **22 A.** Would you like to have that material?
 14:23:23 **23** Would you like to have that --
 14:23:24 **24 Q.** This deposition doesn't work if you ask
 14:23:26 **25** questions back to me.
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14:23:27 **1 A.** I understand. I understand.
 14:23:27 **2 Q.** Can you identify any published authority
 14:23:29 **3** for your definition of fibrous talc?
 14:23:31 **4 A.** Sure.
 14:23:31 **5 Q.** What?
 14:23:32 **6 A.** I would want to say EPA right now.
 14:23:46 **7 Q.** Any other?
 14:23:47 **8 A.** I'd have to think about that.
 14:23:50 **9 Q.** Specifically what EPA document?
 14:23:53 **10 A.** I'll have to find that for you. Be happy
 14:23:58 **11** to find that.
 14:23:58 **12 Q.** In the method in the 22262 method that you
 14:24:04 **13** used in your report, does it use the phrase fibrous
 14:24:08 **14** talc?
 14:24:08 **15 A.** I don't recall. I'd have to look through
 14:24:10 **16** it.
 14:24:11 **17 Q.** Does it use the phrase asbestiform talc?
 14:24:13 **18 A.** Same answer.
 14:24:14 **19 Q.** Do you think those phrases are in there?
 14:24:17 **20 A.** I would have to look.
 14:24:18 **21 Q.** Are fibrous talc and asbestiform talc
 14:24:24 **22** different?
 14:24:25 **23 A.** Fibrous talc and asbestiform talc, if it
 14:24:29 **24** meets the definition, it would be considered
 14:24:31 **25** asbestiform talc, and you could still call it fibrous
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14:24:34 **1** talc.
 14:24:35 **2 Q.** Are they --
 14:24:35 **3 A.** So they could be one and the same.
 14:24:37 **4 Q.** Could they be one and the same --
 14:24:39 **5 A.** Let's say they are. If they meet the
 14:24:41 **6** definition, then they are.
 14:24:43 **7 Q.** So the two phrases are synonymous?
 14:24:46 **8 A.** If they meet the specifications for the
 14:24:48 **9** regulated fiber, the definition, than they are.
 14:24:50 **10 Q.** Is there a situation where fibrous talc
 14:24:53 **11** and asbestiform talc aren't the same?
 14:24:56 **12** MS. O'DELL: Object to the form.
 14:24:57 **13** THE WITNESS: Again, if they don't meet
 14:24:58 **14** the aspect ratio, then they wouldn't be the
 14:25:03 **15** same.
 14:25:03 **16 Q.** (By Mr. Chachkes) Well, then they
 14:25:04 **17** wouldn't be fibrous talc and asbestiform --
 14:25:06 **18 A.** Sure. They could be --
 14:25:06 **19** MS. O'DELL: Object to the form.
 14:25:09 **20** THE WITNESS: -- fibrous at 4-to-1,
 14:25:09 **21** 3-to-1, 2-to-1. Sure. They will have a fibrous
 14:25:13 **22** form.
 14:25:13 **23 Q.** (By Mr. Chachkes) So you're saying that
 14:25:14 **24** if there's -- you could have fibrous talc at a 2-to-1
 14:25:18 **25** aspect ratio, but it would not be asbestiform talc?
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14:25:21 **1** **A.** Correct.
 14:25:21 **2** **Q.** Are there two kinds of tremolite,
 14:25:34 **3** asbestiform and nonasbestiform?
 14:25:36 **4** **A.** Yes.
 14:25:36 **5** **Q.** Just identifying something as tremolite
 14:25:41 **6** doesn't mean it's asbestiform?
 14:25:43 **7** MS. O'DELL: Object to the form.
 14:25:44 **8** THE WITNESS: It can be massive tremolite.
 14:25:47 **9** You know, if it's fibrous and it meets the
 14:25:49 **10** definition, then it's going to be asbestiform.
 14:25:51 **11** I mean, according to the definition.
 14:25:53 **12** **Q.** (By Mr. Chachkes) The question is just
 14:25:54 **13** identifying something as tremolite does not mean it's
 14:25:56 **14** asbestiform; is that correct?
 14:25:57 **15** MS. O'DELL: Object to the form.
 14:25:58 **16** THE WITNESS: Once again, you would have
 14:26:02 **17** to look at the form.
 14:26:03 **18** **Q.** (By Mr. Chachkes) To determine whether
 14:26:04 **19** it's asbestiform?
 14:26:05 **20** **A.** Yes.
 14:26:06 **21** MS. O'DELL: Object to the form.
 14:26:07 **22** **Q.** (By Mr. Chachkes) Just identifying
 14:26:08 **23** something as anthophyllite doesn't mean it's
 14:26:10 **24** asbestiform; correct?
 14:26:11 **25** MS. O'DELL: Object to the form.
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14:26:12 **1** THE WITNESS: Once again, if it meets the
 14:26:15 **2** definition than it would be.
 14:26:17 **3** **Q.** (By Mr. Chachkes) Okay. And if it
 14:26:19 **4** doesn't meet the definition, it wouldn't be?
 14:26:21 **5** MS. O'DELL: Object to the form.
 14:26:22 **6** THE WITNESS: Well, it's still
 14:26:23 **7** anthophyllite. It may be, you know, below the
 14:26:26 **8** aspect ratio again. Causes the same health
 14:26:30 **9** effects.
 14:26:30 **10** **Q.** (By Mr. Chachkes) What's a cleavage
 14:26:36 **11** fragment again?
 14:26:36 **12** MS. O'DELL: Asked and answered.
 14:26:38 **13** THE WITNESS: Yeah. Talked about that
 14:26:39 **14** already.
 14:26:39 **15** **Q.** (By Mr. Chachkes) So what is it?
 14:26:41 **16** **A.** It is a -- it's a form that would not have
 14:26:45 **17** parallel sides. Wouldn't have the aspect ratio.
 14:26:49 **18** It's going to be an odd shape.
 14:26:50 **19** **Q.** Is something that had nonparallel sides
 14:26:55 **20** with an aspect ratio of 6-to-1, would that be a
 14:26:59 **21** cleavage fragment?
 14:27:00 **22** MS. O'DELL: Object to the form.
 14:27:01 **23** THE WITNESS: Most likely.
 14:27:02 **24** **Q.** (By Mr. Chachkes) Do you agree with the
 14:27:03 **25** statement: Crushing of nonasbestiform amphibole can
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14:27:06 **1** lead to elongate fragments that conform to the
 14:27:09 **2** definition of an asbestiform fiber?
 14:27:11 **3** MS. O'DELL: Object to form.
 14:27:12 **4** THE WITNESS: Yes.
 14:27:12 **5** **Q.** (By Mr. Chachkes) Do you agree with this
 14:27:13 **6** statement: Crushed nonasbestiform amphiboles rarely
 14:27:17 **7** have aspect ratios exceeding 30-to-1?
 14:27:21 **8** **A.** I mean, that is -- that's been stated, but
 14:27:29 **9** it's as rarely -- so it's not 100 percent. So you
 14:27:35 **10** can have some.
 14:27:35 **11** **Q.** But you agree with the statement?
 14:27:38 **12** MS. O'DELL: Object to the form. He just
 14:27:40 **13** said what he thought about the statement.
 14:27:41 **14** THE WITNESS: Yeah.
 14:27:41 **15** **Q.** (By Mr. Chachkes) It's yes or no. Do
 14:27:43 **16** crushed -- do you agree with this statement, yes or
 14:27:45 **17** no: Crushed nonasbestiform amphiboles rarely have
 14:27:48 **18** aspect ratios exceeding 30-to-1?
 14:27:50 **19** MS. O'DELL: You may answer it any way
 14:27:52 **20** you'd like, Doctor. You're not restricted.
 14:27:54 **21** THE WITNESS: I mean, I've already
 14:27:55 **22** answered part of the question, and I would say
 14:27:56 **23** yes, you know.
 14:28:00 **24** MS. O'DELL: We have been going about an
 14:28:01 **25** hour. Why don't we take a quick break.
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14:28:04 **1** MR. CHACHKES: Sure.
 14:28:43 **2** (Recess from 2:28 p.m. to 2:52 p.m.)
 14:28:43 **3** (Defendants' Exhibit 1 was marked for
 14:52:54 **4** identification.)
 14:52:54 **5** **Q.** (By Mr. Chachkes) Okay. Dr. Rigler, this
 14:53:11 **6** has already been marked as Rigler Exhibit 1. Can you
 14:53:15 **7** confirm that those are MAS invoices?
 14:53:17 **8** **A.** Let's see. It has MAS on the letterhead.
 14:53:26 **9** They look like they are, yep.
 14:53:29 **10** **Q.** Okay. It looks like the first page is an
 14:53:31 **11** April invoice. Am I right there?
 14:53:33 **12** **A.** April 8 to April 11, 2018.
 14:53:38 **13** **Q.** Okay. And it looks like the second one on
 14:53:42 **14** page 2 is a March invoice?
 14:53:44 **15** **A.** Let's see. Yes.
 14:53:46 **16** **Q.** And then page 3 looks like a single block
 14:53:50 **17** billing for, I'm guessing, the report, the
 14:53:56 **18** November 15 report?
 14:53:56 **19** **A.** I don't know. I have no idea. First time
 14:53:59 **20** I've seen these.
 14:53:59 **21** **Q.** Okay.
 14:54:00 **22** **A.** Yeah, so I don't know.
 14:54:01 **23** **Q.** Okay. So you wouldn't know whether
 14:54:03 **24** there's other billing --
 14:54:04 **25** **A.** I have no idea.
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14:54:05 **1** Q. And you don't know whether there's
 14:54:07 **2** underlying documents that support these?
 14:54:09 **3** A. I don't know.
 14:54:10 **4** Q. And you don't --
 14:54:11 **5** A. Have to ask Dr. Longo.
 14:54:12 **6** Q. Okay. And you don't know what the block
 14:54:14 **7** billing is for on number 3?
 14:54:15 **8** A. No.
 14:54:16 **9** Q. The third page, that is?
 14:54:17 **10** A. No, I don't.
 14:54:18 **11** Q. Do you know why the number 14 appears on
 14:54:22 **12** the third page?
 14:54:23 **13** A. That would be the department number.
 14:54:26 **14** Q. It's your department?
 14:54:27 **15** A. 14, yes.
 14:54:28 **16** Q. And what's that called?
 14:54:31 **17** A. I think it's called legal.
 14:54:33 **18** Q. Okay. So you're in legal?
 14:54:34 **19** A. Yes.
 14:54:35 **20** Q. Are you in any other departments?
 14:54:36 **21** A. No.
 14:54:37 **22** Q. Is Dr. Longo in legal?
 14:54:39 **23** A. Yes.
 14:54:39 **24** Q. Is he in any other departments?
 14:54:41 **25** A. Well, he is the departments.

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1 Q. Oh, okay.
 14:54:44 **2** A. He's MAS.
 14:54:44 **3** Q. Is he in every department, 1 through
 14:54:47 **4** whatever?
 14:54:47 **5** A. I would say yes to that, but you need to
 14:54:50 **6** ask him about that.
 14:54:50 **7** Q. What is the department called legal? What
 14:54:52 **8** is it?
 14:54:53 **9** A. 14. It just says 14.
 14:54:54 **10** Q. No, I mean substantively, what does legal
 14:54:58 **11** do? Why is there a group called legal?
 14:55:01 **12** A. It's just called. I don't know. That's
 14:55:02 **13** what they've always called it.
 14:55:03 **14** Q. Does it do all the work that is for
 14:55:06 **15** litigations?
 14:55:07 **16** A. I don't --
 14:55:09 **17** MS. O'DELL: Object to form.
18 THE WITNESS: -- know. You'd have to ask
 14:55:11 **19** Dr. Longo. Because they came up with the
 14:55:13 **20** numbers and designations.
 14:55:14 **21** Q. (By Mr. Chachkes) When you do work that
 14:55:16 **22** is billable to, let's say, a company that's not
 14:55:21 **23** involved in litigation, does that go through unit 14?
 14:55:24 **24** A. For me?
 14:55:25 **25** Q. Yes.

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14:55:25 **1** A. I guess it does.
 14:55:27 **2** Q. Okay.
 14:55:27 **3** A. I just give them the hours.
 14:55:29 **4** Q. Okay. I'm done with that one.
 14:55:34 **5** A. All right.
 14:55:34 **6** MR. CHACHKES: I still have a request
 14:55:35 **7** pending for billing.
 14:55:37 **8** MS. O'DELL: That's what I have in my
 14:55:39 **9** possession.
10 MR. CHACHKES: Okay.
 14:55:39 **11** MS. O'DELL: If we receive any others,
 14:55:41 **12** I'll let you know.
 14:55:43 **13** Q. (By Mr. Chachkes) Okay. Can you pull up
 14:55:50 **14** Exhibit 5, which is, I think, if I've got it right,
 14:56:04 **15** 22262-2.
 14:56:14 **16** MR. SILVER: Alex, just for the record,
 14:56:16 **17** when you say exhibit numbers, these are exhibits
 14:56:17 **18** to the depo of Dr. Longo that happened on
 14:56:21 **19** February 5 of 2019?
 14:56:23 **20** MR. CHACHKES: Correct. And a good
 14:56:24 **21** clarification.
 14:56:24 **22** Q. (By Mr. Chachkes) So this is Exhibit 5 to
 14:56:28 **23** yesterday's Longo deposition, if you can --
 14:56:29 **24** A. I don't have that.
 14:56:30 **25** Q. It's probably in this stack. I'll help

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 14:56:32 **1** you find it.
 14:56:40 **2** MS. O'DELL: Are you referring to 22262-2?
 14:56:42 **3** MR. CHACHKES: Part 2, yes.
4 MS. O'DELL: Part 2.
 14:56:45 **5** MR. CHACHKES: Dash 2. Okay.
 14:56:51 **6** MS. O'DELL: I think I gave you mine.
7 MR. CHACHKES: That one's his. It's got
 14:56:58 **8** the stamp on it.
9 MS. O'DELL: It does, but I think I gave
10 him mine earlier.
11 THE WITNESS: Yeah, I think you did. It's
12 in there. She has it, hers.
 14:56:59 **13** Q. (By Mr. Chachkes) Okay.
 14:56:59 **14** A. There we go.
 14:57:02 **15** Q. Can you turn to page -- well, do you see
 14:57:06 **16** where there's a section 3, Terms and Definitions,
 14:57:10 **17** it's very near the front?
 14:57:12 **18** A. Yes.
 14:57:12 **19** Q. And there's a definition for asbestiform
 14:57:14 **20** that's 3.5?
 14:57:22 **21** A. Yes.
 14:57:23 **22** Q. And do you see where there's a definition
 14:57:25 **23** for asbestos, 3.6?
 14:57:26 **24** A. Yes.
 14:57:27 **25** Q. You didn't apply -- when you talk about

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14:57:36 **1** asbestos in your report, it's not the definition of
 14:57:40 **2** asbestos that's in 3.6; correct?
 14:57:43 **3** MS. O'DELL: Object to the form.
 14:57:44 **4** THE WITNESS: Yeah. The 3.6 definition is
 14:57:49 **5** the one that we say is -- this is a geological
 14:57:54 **6** definition.
 14:57:54 **7** Q. (By Mr. Chachkes) Right. And so my
 14:57:55 **8** question is when I read the word asbestos in your
 14:57:57 **9** report, it's not the 3.6 definition in this
 14:58:02 **10** Exhibit 5; right?
 14:58:03 **11** MS. O'DELL: Object to the form.
 14:58:04 **12** THE WITNESS: It is based on the
 14:58:08 **13** regulatory definition.
 14:58:09 **14** Q. (By Mr. Chachkes) And the same question:
 14:58:11 **15** Is it the -- it's different from the definition in
 14:58:15 **16** 3.6; correct?
 14:58:16 **17** A. The regulatory definition?
 14:58:18 **18** Q. The definition you're looking at right in
 14:58:20 **19** front of you --
20 A. Yes.
 14:58:21 **21** Q. -- that's 3.6?
 14:58:22 **22** A. Yes.
 14:58:22 **23** Q. So in your report when you use asbestos,
 14:58:24 **24** it's different than 3.6?
 14:58:26 **25** MS. O'DELL: Object to the form.
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14:58:27 **1** Go ahead.
 14:58:29 **2** THE WITNESS: The regulatory definition,
 14:58:32 **3** again, depending upon the document that you look
 14:58:34 **4** at, will include some of this language. For
 14:58:37 **5** instance, the EPA includes some of this same
 14:58:41 **6** language that's in 3.6, so you'll have some
 14:58:43 **7** overlap there.
 14:58:44 **8** Q. (By Mr. Chachkes) I'm not asking about
 14:58:45 **9** overlap.
 14:58:46 **10** Can I assume that whenever you use the
 14:58:47 **11** phrase asbestos in your report you mean verbatim what
 14:58:50 **12** is in 3.6 that's right in front of you?
 14:58:53 **13** MS. O'DELL: Object to the form. That's
 14:58:55 **14** not what he said.
 14:58:56 **15** THE WITNESS: I hear what you're saying.
 14:59:00 **16** Again, the regulatory definitions by standard
 14:59:07 **17** groups, such as EPA, ASTM, they have this
 14:59:16 **18** language in their definition, all right. So
 14:59:20 **19** there's an overlap there.
 14:59:21 **20** If you want to say we don't do that, what
 14:59:24 **21** I would say is there is an overlap there, but
 14:59:28 **22** this is a geological definition, and we -- you
 14:59:35 **23** can't measure this flexibility and strength at
 14:59:37 **24** the level of the structures that we're looking
 14:59:40 **25** at.
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14:59:40 **1** Q. (By Mr. Chachkes) Okay.
 14:59:41 **2** A. So I hope I've answered your question.
 14:59:43 **3** Q. I thought it was a simple question, so I
 14:59:45 **4** guess I have to ask it again.
 14:59:46 **5** But, I mean, when you say there is
 14:59:50 **6** asbestos in your report in J&J's bottles of cosmetic
 14:59:56 **7** talc, do you mean to say that it contains a group of
 14:59:59 **8** silicate materials belonging to the serpentine and
 15:00:02 **9** amphibole groups which have crystallized in the
 15:00:05 **10** asbestiform habit, causing them to be easily
 15:00:08 **11** separated into long, thin, flexible, strong fibers
 15:00:12 **12** when crushed or processed?
 15:00:14 **13** A. If -- again, you know, we go by what's in
 15:00:21 **14** the definition, the regulatory definition. And
 15:00:24 **15** again, that does overlap -- some of the wording in
 15:00:30 **16** those regulatory documents overlap what's in here
 15:00:35 **17** too. So that would be applicable, if that helps
 15:00:38 **18** answer the question.
 15:00:39 **19** Q. I think you know what the question is.
 15:00:41 **20** It's a very simple one.
 15:00:42 **21** Is that your definition of asbestos in
 15:00:44 **22** your report?
 15:00:45 **23** MS. O'DELL: Object to the form.
 15:00:46 **24** Q. (By Mr. Chachkes) Yes or no?
 15:00:48 **25** MS. O'DELL: Object to the form --
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15:00:49 **1** THE WITNESS: Part of it is.
 15:00:50 **2** MS. O'DELL: -- ask --
 15:00:50 **3** Q. (By Mr. Chachkes) -- which part isn't?
 15:00:51 **4** THE REPORTER: Wait.
 15:00:51 **5** MS. O'DELL: Asked and answered.
 15:00:56 **6** THE WITNESS: The strong fibers, the long,
 15:01:00 **7** flexible, strong fibers portion of it.
 15:01:01 **8** Q. (By Mr. Chachkes) Okay. You have not
 15:01:02 **9** determined that J&J talc -- one way or the other,
 15:01:06 **10** whether it is or isn't, you haven't done a
 15:01:09 **11** determination of what you're calling asbestos in J&J
 15:01:12 **12** talc is easily separated into long, thin, flexible,
 15:01:16 **13** strong fibers when crushed or processed?
 15:01:18 **14** MS. O'DELL: Object to form.
 15:01:19 **15** THE WITNESS: I don't know how we would do
 15:01:20 **16** that.
 15:01:20 **17** Q. (By Mr. Chachkes) Okay. And can you turn
 15:01:24 **18** to the next page, to cleavage fragment. Is that the
 15:01:28 **19** definition of cleavage fragment in 3.12 that you use
 15:01:32 **20** in your report?
 15:01:33 **21** A. I don't believe we're -- ask the question
 15:01:38 **22** again. Is that what we use in our report?
 15:01:40 **23** Q. Let me take a step back.
24 A. Is that the --
 15:01:42 **25** Q. Do you use the phrase cleavage fragment in
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15:01:45 **1** your report?
 15:01:46 **2** MS. O'DELL: Object to form.
3 THE WITNESS: We have used cleavage in our
 15:01:48 **4** report.
 15:01:48 **5** **Q.** (By Mr. Chachkes) Okay. Cleavage
 15:01:49 **6** fragment?
 15:01:49 **7** **A.** I want to say yes to that.
8 **Q.** Okay.
 15:01:51 **9** **A.** I'd have to look, but I believe so, yes.
 15:01:53 **10** **Q.** When I read cleavage fragment in your
 15:01:55 **11** report, is it the definition I'm reading in 3.12?
 15:01:59 **12** **A.** We would, again, refer to how it was --
 15:02:06 **13** that it didn't meet the regulatory definition of
 15:02:09 **14** parallel sides, less than 1/2 a micron, 5-to-1 aspect
 15:02:13 **15** ratio.
 15:02:14 **16** **Q.** Okay. And you would say that in your
 15:02:18 **17** report, something that is a fragment of a crystal
 15:02:23 **18** that is bounded by cleavage faces is not a cleavage
 15:02:27 **19** fragment if it has an aspect ratio of greater than
 15:02:29 **20** 5-to-1?
 15:02:30 **21** MS. O'DELL: Object to form.
 15:02:31 **22** THE WITNESS: Correct. If it had the
 15:02:32 **23** defining characteristics of the regulatory
 15:02:34 **24** definition.
 15:02:39 **25** MR. CHACHKES: Okay. No further
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15:02:41 **1** questions.
 15:02:42 **2** Subject to the same objection and
 15:02:46 **3** complaint we had yesterday about late produced
 15:02:49 **4** documents, I'll pass the witness.
 15:02:52 **5** MS. O'DELL: You know our position. We
 15:02:53 **6** don't believe they're late produced.
 15:02:55 **7** MR. CHACHKES: I thought you were agreeing
 15:02:56 **8** it was late produced, no?
 15:02:56 **9** MS. O'DELL: I just wanted to make sure
 15:02:58 **10** you didn't think my silence was acquiescence.
 15:03:00 **11** We're opposed.
 15:03:03 **12** EXAMINATION
 15:03:04 **13** BY MR. SILVER:
 15:03:05 **14** **Q.** Good afternoon, Dr. Rigler. My name is
 15:03:05 **15** Mark Silver. I am representing Imerys Talc America.
 15:03:06 **16** I only have a couple of questions for you.
 15:03:09 **17** With my questions, after I ask them, make
 15:03:10 **18** sure that your attorneys have a chance to respond.
 15:03:13 **19** There are some based on off-record conversations they
 15:03:16 **20** may or may not instruct you to answer and/or you
 15:03:19 **21** won't feel comfortable answering.
 15:03:21 **22** We're going to do what's known as making a
 15:03:22 **23** record so that we can have a collegial disagreement
 15:03:26 **24** at some hopefully later date and not today, but we'll
 15:03:28 **25** see how it goes.
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15:03:30 **1** The first one is easy. I just want to
 15:03:30 **2** make sure that I understand an answer you gave
 15:03:32 **3** earlier.
 15:03:35 **4** It was my understanding that you were
 15:03:36 **5** asked by Mr. Chachkes about whether you were working
 15:03:39 **6** on something that you intended to be published in
 15:03:43 **7** peer-reviewed literature relating to talc, and you
 15:03:45 **8** responded you could not confirm or deny.
 15:03:47 **9** Is that an accurate summarization of your
 15:03:50 **10** testimony?
 15:03:50 **11** **A.** That is what I said.
 15:03:51 **12** **Q.** Okay. And my understanding is you cannot
 15:03:53 **13** confirm or deny because you and/or MAS believe that
 15:03:58 **14** work, if it exists, would be proprietary; is that
 15:04:01 **15** correct?
 15:04:01 **16** **A.** And it's our policy also.
 15:04:03 **17** **Q.** Okay. So that work --
 15:04:06 **18** **A.** Yes.
 15:04:06 **19** **Q.** Is there a written policy on what MAS
 15:04:09 **20** considers proprietary?
 15:04:09 **21** **A.** That's Dr. Longo's policy, so you'll have
 15:04:11 **22** to discuss that with him.
 15:04:12 **23** **Q.** Okay. But have you ever seen a written
 15:04:14 **24** policy on it?
 15:04:15 **25** **A.** I don't recall seeing one. But again,
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15:04:19 **1** talk to Dr. Longo.
 15:04:20 **2** **Q.** Okay. But your understanding, because
 15:04:22 **3** you're the one -- right now, your understanding is
 15:04:24 **4** it's proprietary, and you got that understanding from
 15:04:26 **5** a conversation with Dr. Longo?
 15:04:28 **6** **A.** It is proprietary --
 15:04:29 **7** MS. O'DELL: Object to form.
 15:04:31 **8** THE WITNESS: -- and that's -- yeah, I
 15:04:31 **9** have to abide by that.
 15:04:32 **10** **Q.** (By Mr. Silver) But my question is you
 15:04:35 **11** got that understanding because you had a conversation
 15:04:37 **12** with Dr. Longo about it?
 15:04:38 **13** **A.** That's his policy. Yes.
14 **Q.** Okay.
 15:04:40 **15** **A.** Yes.
 15:04:41 **16** **Q.** So I'm going to ask you something a little
 15:04:44 **17** more discrete and let's see if we get -- if you give
 15:04:48 **18** the same answer, you give the same answer.
 15:04:49 **19** **A.** All right.
 15:04:50 **20** **Q.** This work, whether you're doing it or not,
 15:04:53 **21** that's intended to be published in peer-reviewed
 15:04:57 **22** literature, does it have anything to do with any of
 15:04:59 **23** the opinions contained in any of the MDL reports that
 15:05:02 **24** have been produced in this case?
 15:05:03 **25** MS. O'DELL: Object to the form.
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15:05:04 **1** THE WITNESS: I can't answer that. I
 15:05:08 **2** don't have an answer for that.
 15:05:09 **3** **Q.** (By Mr. Silver) Okay. Same question,
 15:05:11 **4** does this work intending to be published in
 15:05:15 **5** peer-reviewed literature, if it's being done, have
 15:05:16 **6** anything to do with any of the samples that were
 15:05:22 **7** provided by Imerys in this litigation?
 15:05:25 **8** MS. O'DELL: Objection. Form.
 15:05:26 **9** THE WITNESS: Again, I can't -- I can't
 15:05:28 **10** answer that. You'll have to talk to Dr. Longo.
 15:05:31 **11** **Q.** (By Mr. Silver) All right. This work
 15:05:32 **12** that you're intending to be published in
 15:05:35 **13** peer-reviewed literature, whether or not it's being
 15:05:37 **14** done, is it being funded in any way directly or
 15:05:40 **15** indirectly by any of the plaintiffs' counsel?
 15:05:43 **16** **A.** I don't know.
 15:05:43 **17** **Q.** This work, whether it's being done or not,
 15:05:47 **18** with respect to being intended to be published in
 15:05:50 **19** peer-reviewed literature, are you working with any
 15:05:54 **20** other scientists or experts that are also working
 15:06:04 **21** on -- in this talc litigation?
 15:06:05 **22** MS. O'DELL: Object to the form.
 15:06:06 **23** THE WITNESS: I don't know what their --
 15:06:09 **24** how they're working, in what capacity that way.
 15:06:12 **25** I don't know.
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15:06:13 **1** **Q.** (By Mr. Silver) Okay. This work, whether
 15:06:15 **2** it's being done or not, is it being worked in
 15:06:17 **3** conjunction with scientists outside of MAS?
 15:06:22 **4** **A.** Yes. If it is, in fact.
 15:06:25 **5** **Q.** If it is, in fact, being done.
 15:06:27 **6** I apologize, I don't have realtime here.
 15:06:37 **7** With respect to the work, if it is being
 15:06:41 **8** done on Imerys samples, do you have an
 15:06:47 **9** understanding -- strike that. I'll just state it.
 15:06:50 **10** To the extent there is work being done,
 15:06:53 **11** Imerys is hereby giving MAS notice verbally and will
 15:06:56 **12** follow it up in writing that it does not have Imerys'
 15:06:59 **13** consent to use any of the samples that was produced
 15:07:01 **14** in this litigation. If work's being done and you're
 15:07:03 **15** using it, MAS is on notice. Imerys will send
 15:07:07 **16** followup in writing.
 15:07:13 **17** One more.
 15:07:16 **18** Any of the work that's being done, if it's
 15:07:19 **19** being done with an intent to publish in a peer
 15:07:21 **20** review, does it have anything to do with any of the
 15:07:23 **21** underlying data used in any of the MDL reports?
 15:07:25 **22** **A.** I don't know. I have no idea. I can't
 15:07:29 **23** make a comment on it.
 15:07:34 **24** MR. SILVER: No further questions.
 15:07:35 **25** THE WITNESS: Thank you.
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15:07:41 **1** MR. FROST: I don't have a mic.
 15:07:48 **2** MR. CHACHKES: Switch with me.
 15:07:48 **3** MS. O'DELL: So we've got second J&J
 15:07:50 **4** counsel?
 15:07:51 **5** MR. FROST: J&J is just joining in the
 15:07:52 **6** instruction that if there are any Johnson &
 15:07:55 **7** Johnson samples being used in the work that may
 15:07:56 **8** or may not be being done, you know, at this
 15:07:59 **9** point we do not consent to releasing any of the
 15:08:01 **10** confidentially on the samples that exist under
 15:08:03 **11** the MDL order.
 15:08:08 **12** MS. O'DELL: Any further questions
 15:08:10 **13** for Imerys?
 15:08:13 **14** Okay.
 15:08:13 **15** EXAMINATION
 15:08:16 **16** BY MS. O'DELL:
 15:08:16 **17** **Q.** Okay. Dr. Longo [sic], I've got just a
 15:08:28 **18** few questions for you.
 15:08:30 **19** Would you please describe for us your
 15:08:34 **20** educational background? Let's start there.
 15:08:36 **21** **A.** I have a Bachelor of Science degree in
 15:08:43 **22** biology from Villanova University. And as I stated
 15:08:46 **23** before, this was a premedical curriculum, so it was
 15:08:50 **24** heavy on chemistry, organic chemistry. Also I think
 15:08:56 **25** I had comparative anatomy, all the typical
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15:09:01 **1** undergraduate courses you have. But the ones that I
 15:09:03 **2** selected beyond that were related to the medical
 15:09:06 **3** field.
 15:09:08 **4** And then I have a Ph.D. from the
 15:09:13 **5** University of Georgia in microbiology and a heavy
 15:09:18 **6** emphasis in that on pathogenic organisms, also using
 15:09:24 **7** electron microscopy techniques in the analysis of
 15:09:28 **8** different types of samples.
 15:09:30 **9** Also have postgraduate training at the
 15:09:33 **10** University of Georgia, also -- we did a lot of
 15:09:37 **11** research projects for my major professor at that
 15:09:42 **12** time.
 15:09:42 **13** Then I also taught a semester course at
 15:09:49 **14** Emory University in human anatomy.
 15:09:52 **15** So you want me to go on some more?
 15:09:55 **16** **Q.** You can stop when you're finished, when
 15:09:58 **17** you feel like you've described that. And if you --
 15:10:01 **18** well, let me break right here and just ask this
 15:10:02 **19** question.
 15:10:03 **20** Would you describe briefly your experience
 15:10:09 **21** in testing for the presence of asbestos?
 15:10:12 **22** **A.** Okay. I've been with MAS since the early
 15:10:20 **23** '90s. I think I came to work there in 1989. And
 15:10:25 **24** we -- one of the first projects that I worked on
 15:10:27 **25** while I was there was the analysis of these Kent
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15:10:32 **1** filter cigarettes that had crocidolite asbestos in
 15:10:36 **2** the filters, and that asbestos was in those filters
 15:10:39 **3** up to 10 percent by weight. 10 percent. They were
 15:10:43 **4** essentially solid crocidolite asbestos.
 15:10:47 **5** One of the things that the manufacturers
 15:10:51 **6** had touted was that they were -- how can I put it --
 15:10:56 **7** the best cigarettes for human health, essentially.
 15:10:59 **8** And if you talk to people that had smoked those, one
 15:11:04 **9** of the complaints they had was the filter worked so
 15:11:06 **10** well that all you got was hot air out of them, and we
 15:11:09 **11** can see why.
 15:11:10 **12** But nonetheless, we published a paper
 15:11:13 **13** based on our findings in manipulating the way that a
 15:11:19 **14** smoker would with those cigarettes to see if there
 15:11:22 **15** were asbestos shed from those filters.
 15:11:26 **16** Well, it turns out that we weren't the
 15:11:28 **17** first ones that found that information out, that at
 15:11:31 **18** the time there was a laboratory -- trying to remember
 15:11:36 **19** the name -- Ernest Fullam laboratory who actually did
 15:11:40 **20** work for the manufacturer, and they actually had
 15:11:42 **21** looked at that smokescreen for asbestos and found
 15:11:47 **22** that they had plenty of it coming out of there at the
 15:11:50 **23** time. So what we did was a study where we quantified
 15:11:53 **24** that amount.
 15:11:54 **25** And then that was published rapidly in the
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15:13:08 **1** our laboratories. So not just asbestos, but, you
 15:13:12 **2** know, other types of particulates.
 15:13:13 **3** **Q.** Are the testing methodologies that are
 15:13:18 **4** employed at MAS methodologies that are generally
 15:13:23 **5** accepted?
 15:13:23 **6** **A.** Yes.
 15:13:25 **7** MR. CHACHKES: Objection. Leading.
 15:13:26 **8** THE WITNESS: These are -- in cases where
 15:13:31 **9** we're doing analysis, we're using standard
 15:13:33 **10** methodologies. Whether it be mass
 15:13:36 **11** chromatography, ion chromatography, all these
 15:13:43 **12** are standard methods that we work, and we create
 15:13:45 **13** SOPs from the standard methods. So they are
 15:13:45 **14** incorporated into the actual methods that we
 15:13:51 **15** use.
 15:13:51 **16** And again, here in the asbestos analysis
 15:13:54 **17** area, we have multiple standard methodologies
 15:13:57 **18** that we use.
 15:13:57 **19** **Q.** (By Ms. O'Dell) Have you employed those
 15:13:59 **20** standard methodologies in your work in preparing the
 15:14:03 **21** report for the MDL?
 15:14:05 **22** MR. CHACHKES: Objection. Leading.
 15:14:06 **23** THE WITNESS: Yes. Yes, we have. And
 15:14:08 **24** they are all listed in the report.
 15:14:10 **25** **Q.** (By Ms. O'Dell) You've talked today about
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 15:11:57 **1** Journal of Cancer so that it could get out and people
 15:12:01 **2** could know that if they had smoked these cigarettes
 15:12:03 **3** before, it was time to talk to a doctor.
 15:12:05 **4** So that was one of the first studies that
 15:12:08 **5** I worked on on the asbestos side.
 15:12:11 **6** The other, we developed a filter cassette
 15:12:15 **7** at the laboratory that we were in the process of
 15:12:18 **8** manufacturing, and so we were in that business for a
 15:12:23 **9** while so I helped with that technology.
 15:12:25 **10** But we also did things like testing
 15:12:28 **11** batteries. I know that you've heard the Sears
 15:12:31 **12** DieHard batteries. So we did tests on those
 15:12:34 **13** batteries because they were coming back -- people
 15:12:37 **14** were buying them and then the battery would die
 15:12:39 **15** within a very short period of time, and the
 15:12:43 **16** contention was that these batteries were defective.
 15:12:46 **17** Well, what was happening was they were
 15:12:47 **18** buying batteries from people, charging them up, and
 15:12:50 **19** putting them back on the shelf. So we essentially
 15:12:53 **20** proved that that was happening. And that was a large
 15:12:55 **21** study that we did in the early '90s also. So it was
 15:12:58 **22** a big materials analysis study.
 15:13:01 **23** But over the years I've participated in
 15:13:03 **24** hundreds of studies that have analyzed all kinds of
 15:13:06 **25** particulates using the technologies that we have at
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 15:14:12 **1** a quality control program that you have at MAS.
 15:14:16 **2** Please describe that, you know, generally.
 15:14:19 **3** **A.** Okay. The quality program for us to be
 15:14:25 **4** certified by NVLAP NIST, National Institute of
 15:14:30 **5** Standards and Technology, is essentially along the
 15:14:33 **6** lines of what's called ISO 17025, which is
 15:14:37 **7** methodologies for laboratories.
 15:14:41 **8** And they have an entire suite of quality
 15:14:46 **9** controls that you use for all of your
 15:14:49 **10** instrumentation, for your calibration methods, and
 15:14:53 **11** for the analysts, because in these cases, the
 15:14:56 **12** analysts are essentially the machines. They're not
 15:15:00 **13** like gas chromatographs; they are people, and the
 15:15:03 **14** people have to be certified for the methods.
 15:15:05 **15** So they are put through the rigors of
 15:15:08 **16** actually extensive training in the beginning when
 15:15:12 **17** they come to our laboratory, and then they have to
 15:15:15 **18** take periodic tests, if you will, from the American
 15:15:19 **19** Industrial Hygiene Institute, AIHA, and also NIST
 15:15:25 **20** NVLAP. They'll send us blind samples, and then what
 15:15:29 **21** we have to do is analyze them and identify them.
 15:15:32 **22** So -- and we do the same thing for other
 15:15:34 **23** programs. Like we do mold analysis, and we're part
 15:15:37 **24** of the AIHA, American Industrial Hygiene
 15:15:41 **25** Association's, certification for our laboratory.
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15:15:43 **1** We also have what's called A2LA. That's
 15:15:47 **2** another certifying body. They're all based upon the
 15:15:52 **3** ISO 17025 for laboratories. So it's very extensive
 15:15:56 **4** quality control.
 15:15:56 **5** **Q.** For approximately how many years has MAS
 15:16:00 **6** had a quality control program like you described?
 15:16:03 **7** **A.** Since as long as I've been there.
 15:16:06 **8** **Q.** So more than 30 years?
 15:16:07 **9** **A.** Oh, yeah. Yeah.
 15:16:08 **10** **Q.** What's your responsibility in the quality
 15:16:10 **11** control process?
 15:16:12 **12** **A.** Well, we have a quality control officer,
 15:16:17 **13** and my responsibility is to see that quality of
 15:16:26 **14** program's followed for the work that we do.
 15:16:29 **15** Now, I mean, the program's followed
 15:16:33 **16** according to the certifying body, so we have to
 15:16:37 **17** follow their protocols and standards. And so we just
 15:16:43 **18** have to be sure that we've documented all of our
 15:16:46 **19** activities for quality in all these areas.
 15:16:49 **20** **Q.** Are the quality control standard
 15:16:55 **21** procedures that you've described applied both in --
 15:16:59 **22** are they applied in nonlitigation matters, I'm
 15:17:02 **23** assuming?
 15:17:02 **24** **A.** Yes.
 15:17:02 **25** **Q.** Are they applied in litigation matters?
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15:17:04 **1** **A.** Yes. They're applied in all matters of
 15:17:06 **2** analysis. So we -- I mean, machine calibration,
 15:17:15 **3** analyst training calibration, if you will, that way,
 15:17:19 **4** all of that has to be followed.
 15:17:21 **5** **Q.** Is the methodology that you've used in
 15:17:51 **6** rendering your opinions in this case the same
 15:17:53 **7** methodology that you use in nonlitigation matters?
 15:17:55 **8** **A.** Yes. Same standard types of methods.
 15:17:59 **9** Yes.
 15:17:59 **10** **Q.** Is there anything -- strike that. Let me
 15:18:03 **11** ask this.
 15:18:03 **12** What was your responsibility in relation
 15:18:07 **13** to the MDL report?
 15:18:10 **14** **A.** As I stated earlier, it was report review,
 15:18:14 **15** documentation review. As far as data review, I had a
 15:18:20 **16** big portion of the data review. And then the quality
 15:18:23 **17** review.
 15:18:25 **18** **Q.** Okay. You've been asked a number of
 15:18:33 **19** questions about the policy at MAS regarding ongoing
 15:18:46 **20** research or ongoing discussions about research --
 15:18:50 **21** **A.** Yes.
 15:18:50 **22** **Q.** -- and -- do you have an understanding as
 15:18:56 **23** to why it is the policy at MAS not to discuss studies
 15:19:00 **24** that have not been completed or still being
 15:19:03 **25** formulated?
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15:19:06 **1** MR. SILVER: Objection to form.
 15:19:08 **2** THE WITNESS: Well, of course, there's
 15:19:09 **3** client confidentiality, which we hold to the
 15:19:13 **4** highest in terms of any discussions of any work
 15:19:15 **5** that we're doing for anyone else. As you've
 15:19:19 **6** seen today, I haven't talked about any clients
 15:19:22 **7** that we work with, and can't do that.
 15:19:24 **8** As far as publications, that type of
 15:19:27 **9** thing, we don't -- again, that's just a policy.
 15:19:31 **10** We had a bad experience a number of years ago,
 15:19:35 **11** and since that time we've adopted that policy,
 15:19:38 **12** and it's part of the confidential documentation
 15:19:42 **13** that we keep.
 15:19:49 **14** MS. O'DELL: Nothing further. Thank you.
 15:19:53 **15** MR. CHACHKES: Nothing more here.
 15:20:02 **16** MR. FROST: I just want to make it clear,
 15:20:06 **17** until we can resolve this issue regarding the
 15:20:08 **18** publication or the potential publication of
 15:20:09 **19** these issues, we would like to and deem that
 15:20:12 **20** this deposition remains open.
 15:20:14 **21** MS. O'DELL: We oppose that, as I think
 15:20:17 **22** the rule is very clear in terms of discovery of
 15:20:20 **23** confidential proprietary matters, and Dr. Rigler
 15:20:23 **24** has testified these are proprietary matters, and
 15:20:27 **25** so we would oppose holding the deposition
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15:20:29 **1** open --
2 MR. FROST: Sure. That's fine.
 15:20:31 **3** MS. O'DELL: -- and certainly discovery.
 15:20:34 **4** MR. FROST: Thank you.
 15:20:36 **5** (Deposition concluded at 3:20 p.m.)
6 (Pursuant to Rule 30(e) of the Federal
7 Rules of Civil Procedure and/or O.C.G.A.
8 9-11-30(e), signature of the witness has been
9 reserved.)
10 (Original transcript sent to Jack Frost.)
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CERTIFICATE

STATE OF GEORGIA:

COUNTY OF HALL:

I hereby certify that the foregoing transcript was taken down, as stated in the caption, and the questions and answers thereto were reduced to typewriting under my direction; that the foregoing pages 1 through 228 represent a true, complete, and correct transcript of the evidence given upon said hearing, and I further certify that I am not of kin or counsel to the parties in the case; am not in the regular employ of counsel for any of said parties; nor am I in anywise interested in the result of said case.

This, the 8th day of February, 2019.

FRANCES BUONO, B-791
Georgia Certified Court Reporter

Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com

DEPOSITION OF MARK W. RIGLER, PH.D. /FCB

I do hereby certify that I have read all questions propounded to me and all answers given by me on the 6th day of February, 2019, taken before Frances Buono, and that:

- 1) There are no changes noted.
2) The following changes are noted:

Pursuant to Rule 30(e) of the Federal Rules of Civil Procedure and/or the Official Code of Georgia Annotated 9-11-30(e), both of which read in part: Any changes in form or substance which you desire to make shall be entered upon the deposition...with a statement of the reasons given...for making them. Accordingly, to assist you in effecting corrections, please use the form below:

Page No. ____ Line No. ____ should read: _____

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COURT REPORTER DISCLOSURE

Pursuant to Article 10.B. of the Rules and Regulations of the Board of Court Reporting of the Judicial Council of Georgia which states: "Each court reporter shall tender a disclosure form at the time of the taking of the deposition stating the arrangements made for the reporting services of the certified court reporter, by the certified court reporter, the court reporter's employer, or the referral source for the deposition, with any party to the litigation, counsel to the parties or other entity. Such form shall be attached to the deposition transcript," I make the following disclosure:

I am a Georgia Certified Court Reporter. I am here as a representative of Atlanta Reporters, Inc. Atlanta Reporters was contacted to provide court reporting services for the deposition. Atlanta Reporters will not be taking this deposition under any contract that is prohibited by O.C.G.A. 15-14-37(a) and (b).

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DEPOSITION OF MARK W. RIGLER, PH.D. /FCB

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If supplemental or additional pages are necessary, please furnish same in typewriting annexed to this deposition.

MARK W. RIGLER, PH.D.

Sworn to and subscribed before me,
This the ____ day of ____, 20__.

Notary Public
My commission expires: _____

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Exhibit 87

**MISSOURI CIRCUIT COURT
TWENTY-SECOND JUDICIAL CIRCUIT
(City of St. Louis)**

GAIL LUCILLE INGHAM, <i>et al.</i> ,)	
)	
Plaintiffs,)	Cause No. 1522-CC10417
)	
vs.)	
)	
JOHNSON & JOHNSON, <i>et al.</i> ,)	Division: 10
)	
Defendants.)	

AFFIDAVIT OF DR. MARK RIGLER PH.D

On May 21, 2018 Dr. Mark W. Rigler appeared before me the undersigned notary public, and upon being duly sworn stated as follows:

1. My name is Mark W. Rigler. My business address is 3945 Lakefield Court, Suwanee GA 30024. I have personal knowledge of the facts stated here in, and they are all true and correct.

2. I have a Ph.D. in Microbiology from the University of Georgia. I have been a licensed clinical electron microscopy Laboratory Director for the state of Georgia. I have been trained in all phases of electron microscopy including morphological identification of tissues and materials, selected area electron diffraction (SAED), and energy dispersive x-ray analysis (EDS). I have also been trained in the methods of tissue processing that are used by clinical pathologist which include histological sample preparation for histological slide preparation, tissue analysis and identification at the optical microscopy level. I have also been trained in all phases of tissue preparation and tissue sectioning for transmission electron microscopy including tissue preparation for scanning electron microscopy and tissue preparation for cryo-electron microscopy. At MAS I

have directed the analysis of a variety of materials and biological tissues by transmission and scanning electron microscopy including the analysis mineralogical particulates and microfibers including tremolite, actinolite, anthophyllite, chrysotile, amosite and crocidolite asbestos.

3. I have 25 years of experience analyzing soft tissues such as lung tissue, liver, muscle, and a variety of other soft tissues. I have been trained in the histological examination of human tissue types such as epithelial tissue, connective tissue, cartilage, bone, blood as well as have been trained to identify complex organ tissue types including muscle, endocrine, liver, reproductive (ovary, fallopian tube, testes, gametes) gastrointestinal, skeletal, and nervous tissue. I have used a variety of preparation techniques for analyzing human tissues samples for optical and electron microscopy and have prepared tissue samples using the same histological techniques as clinical pathologists as well as have been trained in the histological examination of human tissues. I have used tissue preparation methods that are well established in the literature and in laboratories worldwide. The method used is a technique for preparing soft tissues such as lung, ovarian, fallopian, and lymphatic tissue and is the same technique used regardless of the type of soft tissue. In this method, soft tissues are incubated in a strong basic solution of sodium hypochlorite, potassium hydroxide, sodium hydroxide, or a combination of these solutions. A typical base solution, such as 8% bleach, completely dissolves the soft tissue and preserves mineralogical particulates such as asbestos and talc. These asbestos and talc particles can be recovered by filtration then identified and quantified using transmission or scanning electron microscopy (1-7), . I have performed this process hundreds of times, and regardless of the soft tissue type to be analyzed, the processing of the tissue is the same and the result from the processing, that is, the recovery and isolation of asbestos and talc, is also the same. I have testified in a number of previous cases. And my testimony has been challenged on many occasions pursuant

to *Daubert v. Merrill Dow Pharmaceuticals*. On each of these occasion, the court has overruled the challenge and allowed me to testify.

4. The idea of background asbestos is predicated on studies of air from urban areas (1). These studies have shown air levels of asbestos in the range of 0.0001 to 0.00001 fibers/cc of air and the only asbestos type usually found has been chrysotile. To date, chrysotile asbestos has not been detected in any of the ovarian tissue samples tested at MAS. No tremolite or anthophyllite has been found floating around in urban air according to published studies. The premise of exposure to background levels of tremolite or anthophyllite is unfounded. The woman in the cases were not exposed to any known “background” levels of asbestos.

5. The analysis of the ovarian tissue samples by MAS was a laboratory analysis. Single ovarian, fallopian tube, or pelvic lymph node tissue samples from eight women were analyzed for asbestos and talc burden at MAS. The scientific method used for all of these sample analyses was predicated on the null hypothesis, that the human reproductive tissue in its natural state is void of talc and asbestos particles. The process of cellular growth occurs from the inside out, that is, cell division pushes outward naturally keeping tissues free of particles and fibers. This process, along with scavenger cells, excludes foreign particles at all cellular levels allowing the body to reject and expel foreign particles. This is why no asbestos or talc particles are expected to be found in tissues unless they have been exposed to asbestos or talc (10). However, if the cellular mechanisms for these processes are overwhelmed by heavy or long term continuous exposures to particles such as asbestos and talc, they will accumulate in the tissue. Large asbestos structures (approximately >15 micrometers in length) are not typically found in tissue samples simply because they are not always retained by the body due to physics and their size. Most of the retained fibers and talc particles found in the body are less than 5 micrometers in size because they are

small enough to be transported and moved around in the body. (16, 17, 18) . Finding asbestos or talc particles in human tissues is an indication of one of two things; exposure of the individual to asbestos and talc or contamination of the sample. To rule out the possibility of contamination, the proper laboratory controls, consisting of a process blank and a wax paraffin blank, were run for each analysis along with the tissues samples. Running these laboratory blanks ruled out the possibility of contamination in these tissue analysis cases. It is therefore my opinion that talc and asbestos particulates found in the ovarian tissue was due to exposure of each woman to asbestos and talc bearing products during their lifetime. Samples of ovarian, fallopian and lymph node tissue were analyzed at my laboratory for asbestos burden and seven of the eight women in those cases had asbestos in their ovaries and all eight had talc in their ovarian, fallopian tube, or pelvic lymph node tissue. A review of each woman's medical history indicated that none of them had exposure to any asbestos bearing products (8, 9). However, their histories did show substantial and significant use of baby powder during their lifetime. It has been established in published studies that baby powder has been contaminated with asbestos (11, 12). At MAS, analysis of Johnson & Johnson baby powders has also shown that at least half of tested baby powder samples contained tremolite or anthophyllite asbestos (13). Thus, I concluded that the talc products used by the women whose tissue I examined were the probable source of the asbestos I found in their tissue. My findings were similar to those reported by Gordon in lung tissue of a patient exposed to another company's commercial talcum powder that used some talc from one of the same mines used in Johnson & Johnson's baby powder. (11).

6. For the analysis and identification of asbestos, MAS uses the United States Federal rules and regulations as promulgated in the Federal register volume 52 number 210 October 30, 1987 40 CFR part 763, Asbestos Containing Materials in Schools, final rule notice

per the Asbestos Hazard Emergency Response Act (AHERA) which was enacted under the toxic substances control act (TSCA) of 1986 (14). The rules define how to analyze and identify asbestos using transmission electron microscopy (TEM), energy dispersive x-ray analysis (EDS) and selected area electron diffraction (SAED). Under the rule in the definition of terms, a fiber is defined as, "A structure having a minimum length greater than or equal to 0.5 micrometers and an aspect ratio (linked with) of 5:1 or greater and substantially parallel sides. Note the appearance of the end of the fiber I.E., whether it is flat, rounded or dovetailed (p. 41868) (14)." Additionally in the definition of terms, asbestiform is defined as "a specific type of mineral fibrosity in which the fibers and fibrils possess high tensile strength and flexibility (p. 41858) (14)" This definition, while general is consistent with industry understanding that asbestiform means asbestos-like (fibrous, strong and flexible) and is mainly a geological definition reserved for large asbestos bundles and fibers that are easily seen with the naked eye. This definition has mainly been used in a commercial sense to differentiate grades of asbestos in order to establish commercial pricing. For instance, grades of asbestos with long flexible fibers are more valuable for certain kinds of applications and can cost more than shorter grades of asbestos (15, 19).

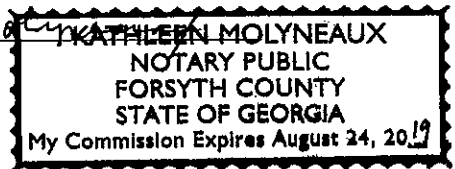
7. MAS is a NVLAP certified asbestos analysis lab (20) and all asbestos analyses performed at MAS unequivocally identify the type of asbestos according to the federal AHERA rules according to the shape (substantially parallel sides), size (greater than 0.5 micrometers in length), aspect ratio (at least 5:1 length to width), chemistry (by energy dispersive x-ray spectroscopy (EDS)), and crystallinity (by selected area electron diffraction pattern (SAED)). The strength and flexibility of extremely small asbestos structures (fibers, bundles) cannot be determined with the electron microscope. However, asbestos fibers and bundles can be positively identified with the transmission electron microscope and, each positively identified asbestos fiber

or bundle must conform to the physical properties, including strength and flexibility (i.e. asbestiform) of each asbestos type shown in the published literature (21, 22, 23). Microscopic or macroscopic asbestos fibers and bundles will possess strength and flexibility regardless of the size.


Mark W. Rigler Ph.D

Subscribed and sworn to before me on this 21st day of May, 2018.


NOTARY PUBLIC



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Exhibit 88

THE LANIER LAW FIRM PLLC

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New York, New York 10022

Tel.: (212) 421-2800

RICARDO RIMONDI and PILAR RIMONDI,

Plaintiffs,

vs.

BASF CATALYSTS LLC (as successor to Engelhard Corp., Engelhard Minerals & Chemicals Corp., and Minerals & Chemicals Corp.), *et al.*,

Defendants.

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION MIDDLESEX COUNTY

DOCKET NO. MID-L-02912-17

CIVIL ACTION
ASBESTOS LITIGATION

**CERTIFICATION OF WILLIAM E. LONGO,
Ph.D.**

I, William E. Longo, Ph.D., of full age, hereby certify as follows:

1. I am of sound mind and otherwise competent to make this Certification. The evidence set out in the following Certification is based on my personal knowledge. If called upon, I could and would competently testify thereto.

2. I have a Bachelor of Science degree in Microbiology, a Master of Science degree in Engineering and a Doctorate in Philosophy in Materials Science, from the University of Florida. My education and employment history may be found in my Curriculum Vitae, which is attached hereto as Exhibit A.

3. I am currently employed at Materials Analytical Services (MAS), LLC as the President. For the last 30 years, I have studied the content, type, and release of asbestos fibers from asbestos-containing products, including products that contain talc. MAS is accredited by the American Industrial Hygiene Association for measurement of asbestos fibers by phase contrast microscopy

and for the analysis of bulk samples of asbestos. MAS is also certified by the National Volunteer Laboratory Accreditation Program for measurement of bulk samples and air samples of asbestos.

4. As a materials scientist, I study the relationships among structure, properties, synthesis, and performance of a wide range of materials. I examine why and how materials behave under various conditions, such as temperature, pressure, stress or exposure to climatic conditions, and how materials are used in every aspect of people's lives. I have spent the last 30 years studying all aspects of asbestos analysis including the use of air samples to analyze the airborne asbestos dust generated from the use of asbestos containing products. This would include the use of both midget impinger and air cassettes. Under my direction our laboratory has analyzed over 300,000-400,000 asbestos samples which included many thousands of air samples.

5. In addition to the routine analysis of air samples for asbestos content, again under my direction, MAS has performed well over a hundred work practice simulations that involve the measurement of airborne asbestos fibers from the use of these products using scientifically recognized methodologies. These work practices studies have been performed for both plaintiffs and defendants; including Westinghouse, Rockbestos, General Electric, Guard-Line, Carborundum, American Insulating Wire Corporation, Continental Wire Company, Eutectic, Tecumseh Engines and Vickers Hydraulic Pumps.

6. At MAS, I analyze and study a wide spectrum of products and associated chemicals, including studies of various asbestos-containing products that test the potential for release of asbestos fibers into the air. These studies demonstrate, among other things, whether a product manufacturer could have anticipated the quantity of asbestos released into the air from its products as well as the levels of asbestos fibers released under certain circumstances. I perform these tests under rigorously controlled laboratory conditions following the governmental standards promulgated by NIOSH and the EPA. Using a specifically designated testing room, I simulate the

typical uses of asbestos-containing products, including for example asbestos-containing cable-hole covers and asbestos cement pipe. MAS utilizes multiple, standardized analytical testing techniques to determine the amount of asbestos released into the air and dispersed into workers' breathing zones, their clothing, and surroundings. MAS methods include the very testing techniques routinely employed by and available to the asbestos industry in the 1950's and 1960's, as well as updated, standardized testing procedures.

7. I am a member of numerous organizations and professional groups specializing in the testing and analysis of asbestos-containing materials, including the former Environmental Protection Agency (EPA) Peer Review Group for the Asbestos Engineering Program, the American Industrial Hygiene Association (AIHA), Materials Research Society, American Society for the Testing of Materials (ASTM), and the American Society of Materials. I have given numerous lectures, including "Settled Dust: Asbestos and Other Particulates," "The Role of the Laboratory Manager, Quality Assurance Officer and the Analyst for NIST Accreditation," and "Fundamentals of Asbestos Analysis by TEM." Additionally, I was requested by the EPA, along with other scientists, to help develop the EPA's protocol for taking and analyzing settled asbestos dust samples. As a member of ASTM, I was also responsible for writing the current ASTM asbestos dust analysis standards.

8. I have published numerous articles on the subject of the analysis and testing of asbestos-containing materials, including the quantification of asbestos particles released upon manipulation of these asbestos products in the manner performed in the work environment. My articles include *Demonstration of the Capability of Asbestos Analysis by Transmission Electron Microscopy* in the 1960's in MICROSCOPE, *Asbestos Exposure During and Following Cable Installation in the Vicinity of Fireproofing* in ENVIRONMENTAL CHOICES TECHNICAL SUPPLEMENT; and *Fiber Release During the Removal of Asbestos-Containing Gaskets: A Work Practice Simulation*, published in the APPLIED OCCUPATIONAL AND ENVIRONMENTAL HYGIENE JOURNAL in 2002 and

Zonolite Attic Insulation Exposure Studies, in the INTERNATIONAL JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH published in 2010. My research and peer-reviewed publications on the subject of the analysis and testing of asbestos-containing materials as described above may be found in my Curriculum Vitae, which is attached hereto as Exhibit A.

9. My consulting extends beyond testimony for plaintiffs in asbestos cases. MAS also consults with defense firms and outside the litigation context with well-known companies such as Hitachi, Intel, BMW, Honda, Dow, Scotts and others. MAS is a leading engineering consulting firm which provides a broad range of services including environmental and industrial hygiene and emissions testing of construction products. MAS has performed consulting work for government agencies such as the Centers for Disease Control and the National Institutes of Health. MAS has also worked as an expert for the City of New York, State of New York, State of Hawaii, State of Texas, State of Utah, City of Los Angeles, City of Baltimore, City of Chicago and the City of Boston in their respective litigation against asbestos companies for property damage litigation. MAS has been involved in testing asbestos-containing materials for over thirty years, and has analyzed hundreds of thousands of asbestos samples.

10. I regularly perform work for clients not involved in litigation and utilize the same generally accepted methodologies and analysis described above. MAS's studies and videotape demonstrations are used for educational and training purposes in conjunction with the American Industrial Hygiene Association, American Society of Safety Engineers, the Environmental Institute, AHERA certification training and the U.S. Public Health Service. Moreover, we go through very stringent and thorough certification processes on a regular basis.

11. Only about 35 to 40% of MAS's overall income is derived from testimony and testing products for asbestos fiber release. Most of what MAS does is non-asbestos litigation and consulting with industry on potential hazards contained in their products or materials. Also I have

performed Work Practice studies on behalf of defendant manufacturers that include GE, Carborundum, American Insulated Wire Corporation, Guard-Line safety apparel and Tecumseh lawn mower engines. These defendants approved of our use of standard methodology for the measurement of airborne asbestos fibers from the use of their products.

12. I have been qualified many times in courts throughout the United States as an expert witness in both material science and industrial hygiene matters relating to asbestos issues, including cases involving talc and talcum powder products. I was most recently qualified as an expert witness regarding my analysis of Johnson & Johnson Baby Powder and Shower to Shower talc products in *Herford v. AT&T, et al.* in Los Angeles, California, and in *Lanzo v. Cyprus Amax Minerals Company* in New Brunswick, New Jersey.

13. I authored a report, dated March 11, 2018, entitled "Analysis of Johnson & Johnson Baby Powder and Valiant Shower to Shower Talc Products for Amphibole Asbestos", which discussed the analysis of thirty separate containers of talc containing Johnson & Johnson's Baby Powder and Valeant Shower-to-Shower for the presence of amphibole asbestos fibers, specifically tremolite. The container construction (metal to plastic) and labeling differences indicate that the products cover a span of many years. The thirty containers were provided by three different law firms to me. One of these samples (Number M665 I 4-001) was a Johnson's Baby Powder product provided by Carolyn Weirick from her home. That bottle contained approximately 24,700 anthophyllite asbestos fibers/gram. A true and correct copy of that report dated March 11, 2018, is attached hereto as Exhibit B.

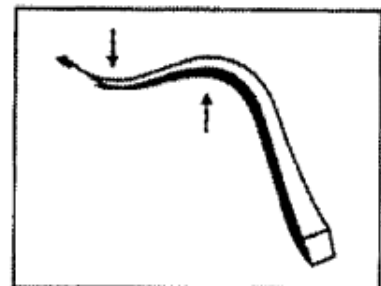
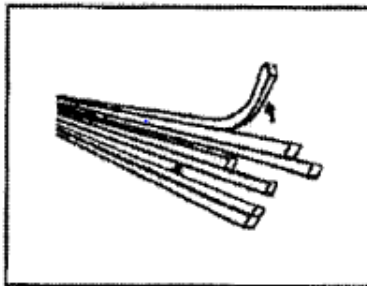
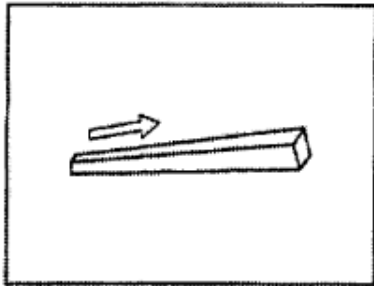
14. For preparation of the samples, we followed the protocol laid out by Professor Alice Blount in her peer-reviewed publication *Amphibole Content of Cosmetic and Pharmaceutical Talcs*. It was conservatively estimated by Dr. Blount that for every 1,000 amphibole particles present in cosmetic and pharmaceutical grade talcs, there would be 1,000,000 talc particles. This large number

of talc-to-amphibole structure ratio, coupled with transmission electron microscope ("TEM") filter preparation overloading issues, reduces the probability of detecting any trace amount of fibrous amphibole structures that may be present in the talc sample by analytical transmission electron microscopy ("ATEM") analysis. In order to address these inherent difficulties, we optimized the heavy liquid density separation sample preparation method originally published by Blount in 1991. Like Blount, our analysis detected primarily tremolite (and the tremolite series asbestos mineral richterite) and some iron rich anthophyllite in both Johnson's Baby Powder and Shower to Shower. I hereby adopt and incorporate that report into this certification as though it was set forth in full.

15. Subsequently, on February 9, 2018, my laboratory received two separate samples from a 1978 container of Johnson's Baby Powder. According to the information supplied with these two samples, they were collected from a February 8, 1978 historical Johnson's Baby Powder container that was supplied by Johnson & Johnson, lot number 113J and bottle/container identification number JBP084. These two samples were given MAS laboratory tracking numbers MAS68233-001 and -002 (two samples from the same bottle). Since the amount of possible amphibole content of the 1978 Johnson's Baby Powder product was expected to be at trace levels (0.1 % or less), it was recognized that this analysis would require the use of an analytical transmission electron microscope (ATEM) as described in the previous March 2018 report (Exhibit B). Using the Blount talc density heavy liquid preparation method for these samples, our ATEM analysis showed that the two 1978 Johnson's Baby Powder product samples contained detectable amounts of amphibole asbestos (anthophyllite) at a concentration range of between 7,240 fibers/gram to 22,100 fibers/gram. A true and correct copy of the February 16, 2018 finding is attached hereto as Exhibit D. I hereby adopt and incorporate that report into this certification as though it was set forth in full.

16. Johnson & Johnson attorneys have alleged that the asbestos structures my laboratory identified in the Johnson & Johnson talcum powder products are non-asbestiform or "cleavage fragments". Without getting into the merits of this allegation, my laboratory conducted analysis using Scanning Electron Microscopy (SEM) of the anthophyllite reported in the two 1978 Johnson's Baby Powder samples from Johnson & Johnson. The SEM analysis confirms that the structures my laboratory identified cannot be considered "cleavage fragments" and indeed are bundles of numerous asbestos fibers. These asbestos structures evidence classic asbestiform growth habits as described in *The Asbestiform and Nonasbestiform Mineral Growth Habit and Their Relationship to Cancer Studies* by Bailey, Kelse, Wylie, and Lee:

ASBESTIFORM



In the asbestiform habit, fibers grow almost exclusively in one direction and exhibit narrow width (on the order of $0.1\ \mu\text{m}$). Fibers that are visible to the eye are bundles of individual crystal fibers known as "fibrils". In some deposits, there is a range in fibril width, sometimes extending up to as much as $0.5\ \mu\text{m}$. Asbestiform fibers wider than $1.0\ \mu\text{m}$ are always bundles of fibrils. Asbestiform minerals have fibrils that are easily separated, although variability exists. In populations of asbestiform fibers, the distribution of particle widths will reflect single fibrils as well as bundles of fibrils. Under the light microscope, this "polyfilamentous" characteristic of fibers is evident, and is the single most important morphological characteristic of the asbestiform habit. Asbestiform fibers are flexible

A true and correct copy of the SEM images for M68233-001 and M68233-002 is attached hereto as Exhibit E. I hereby adopt and incorporate this report into this certification as though it was set forth in full.

17. On March 7, 2018, my laboratory received two 1.5 oz. Johnson's Baby Powder containers belonging to Joanne Anderson (MAS sample numbers M68379-001, M68379-002). These containers appear to be of a more current production and talc source. As with the previously analyzed Johnson & Johnson talcum powder product, the amount of possible amphibole content of these two Johnson's Baby Powder products was expected to be at trace levels (0.1 % or less), therefore the analysis required the use of an analytical transmission electron microscope (ATEM) as described in the previous reports. Using the Blount talc density heavy liquid preparation method for these samples, our ATEM analysis showed that one of the Johnson's Baby Powder product samples (M68379-002) contained detectable amounts of amphibole asbestos (tremolite) at a concentration range of 7160 fibers/gram. A true and correct copy of the Summary Sheet and data for the Anderson containers is attached hereto as Exhibit F. I hereby adopt and incorporate the Anderson summary sheet and data into this certification as though it was set forth in full.

18. In order to determine airborne asbestos amphibole fiber exposure an individual would experience during application of Johnson & Johnson talcum powder products, my laboratory conducted a below the waist application study using Johnson's Baby Powder talc container M65205-001. Approximately 4 grams of baby powder were applied to the lower body of an investigator to determine the potential exposure levels of an individual to asbestos amphibole fibers while applying Johnson's Baby Powder. Both the NIOSH 7400 PCM method and the NIOSH 7402 TEM method were performed to determine if any detectable amphibole asbestos fibers from the Johnson's Baby Powder were released into the breathing zone of the investigator and immediate surrounding area. This study would be applicable to anyone applying talcum powder in a similar fashion to the study subject. The NIOSH 7400 PCM analysis found that the four personal sample results ranged from 3.85 f/cc to 5.86 f/cc with an average mean of 4.52 f/cc. Area air sample results were 0.28 f/cc to 0.58 f/cc with an average mean of 0.41 f/cc. Four of the personal PCM

filters were analyzed by the NIOSH 7402 TEM method and the percent tremolite asbestos fiber concentration ranged from 42.9% to 76.9% resulting in a PCM equivalent range of 1.81 f/cc to 4.51 f/cc. These results are consistent with those already in the published literature, and demonstrate that an individual who uses Johnson & Johnson talcum powder products, would be expected to have a significant exposure to airborne amphibole fibers. A true and correct copy of "MAS Project 14-1852 Below the Waist Application of Johnson & Johnson Baby Powder Supplemental Report# 2" dated January 2018 is attached hereto as Exhibit G. I hereby adopt and incorporate this report into this certification as though it was set forth in full. These exposure levels substantially exceed background exposure levels reported in the literature.

19. Based on my inspection and analyses of the products, my review of Johnson & Johnson documents, and my 30+ years of training and experience in testing and analyzing products, it is my opinion that the products analyzed were what they purported to be: authentic Johnson & Johnson talc powder products. It is my expert opinion that the contents of the products that I tested, specifically the talc and the asbestos, are what was originally in the products as manufactured and sold. Neither the age of the products, identity of their owners, nor the circumstances of their storage (heat, moisture, light ...) over the years would impact the possibility that the talc and asbestos in them were not original to Johnson & Johnson. Unlike something like a fungus or a bacteria, asbestos does not grow inside a bottle (regardless of heat, moisture, light) and talc does not degrade into asbestos as a result thereof.

20. Johnson & Johnson attorneys have repeatedly alleged that somehow the powder inside the containers MAS analyzed could have been "switched" by some unknown person for some unknown reason. This is simply not possible, much less plausible. The two explanations put forward to me by Johnson & Johnson attorneys during deposition and trial testimony for the finding of asbestos in their containers are: 1) that the original talc in the containers of Johnson's Baby Powder

and Shower to Shower was removed and replaced with some other talc (which happened to have trace levels of asbestos) or 2) that the asbestos that we found in the containers was added (either intentionally or unintentionally) to the authentic Johnson's Baby Powder and Shower-to-Shower talc products after they were manufactured and sold. This is a practical impossibility.

21. First, the appearance of the products alone precludes the possibility that someone(s) removed and replaced the original talc in the containers with some other (non-Johnson & Johnson) talc. The containers were original and authentic Johnson's Baby Powder and Shower to Shower containers; there seems to be no dispute about this. They demonstrated absolutely no evidence of having been tampered with in a way that would allow for the removal and replacement of the original talc in them. Specifically, the caps/lids on the products we tested cannot be removed by hand, and would actually leave observable evidence if they had been removed at all. On visual inspection, we did not observe any marks of evidence of removal of the caps/lids. Nevertheless, we analyzed the lids of each samples with a stereoscopic microscope for any imperfections in the plastic lids or bottles that would have been left by the prying of a tool like a screwdriver. Unsurprisingly, none were seen. Accordingly, it is clear that the products had not been opened in a manner that would allow for the replacement of the original contents of these samples.

22. The contents of all of the containers of Johnson's Baby Powder and Shower to Shower samples that we tested were also consistent with what the products purported to be, namely, cosmetic body powder, and there was nothing in the contents that would be inconsistent therewith. Likewise, the substance of the powder was consistent with Johnson's Baby Powder and Shower to Shower products. They were predominantly cosmetic grade talc and had trace amounts of the types of asbestos that, based on my review of several hundred Johnson & Johnson historical documents, have been present in these products consistently since the 1950's.

23. With regard to the products' internal patterns, I conducted a comparative particle size distribution analysis between the samples that tested positive for asbestos and a contemporary ("control") sample of Johnson's Baby Powder that we bought off the shelf. We found that the particle size distribution was consistent among and between the contemporary "control" sample and the all of the vintage samples; and consistent with Johnson & Johnson's own particle size specifications. A true and correct copy of our Talc Size Distribution report, dated August 21, 2017, is attached hereto as Exhibit C. I hereby adopt and incorporate that report into this certification as though it was set forth in full. The consistency of the particle size distribution shows these products to be the same from one to another and it is my opinion that it is highly improbable that some other talc manufacture' s product was somehow added to the exclusion of the Johnson & Johnson talc inside the bottle. In fact, an article authored by executives of Johnson & Johnson and it's talc supplier regarding talc used in various cosmetics (e.g., lipsticks, antiperspirant sticks, body powders, ...) states clearly "[t]hat particle size of the talc raw material used in these products varies widely by product type and by manufacturer."

24. Based on the above, all four of these factors (appearance, contents, substance, and internal patterns of the products) taken together exclude the possibility that someone(s) removed and replaced the original talc in the containers that we tested with some other (non-Johnson & Johnson) talc. There is simply no evidence of intentional tampering or outside contamination.

25. Second, it has also been hypothesized that, even if the samples we tested were original as manufactured and sold by the Johnson & Johnson companies, they were contaminated post-sale (either intentionally or unintentionally) with the asbestos that we found in them. Both of these scenarios are so implausible so as to be virtually impossible.

26. For each set of Johnson & Johnson talc samples that were prepared and analyzed at this laboratory, a process laboratory blank was prepared simultaneously to determine if there was

any cross-contamination originating in our lab. When these process laboratory blanks were analyzed by TEM, no asbestos, including tremolite or chrysotile structures, were found. Therefore, it can be stated, that there was no cross-contamination during sample preparation of the Johnson & Johnson talc samples we analyzed. In addition, and especially because contaminating tremolite asbestos could not get into the containers through the lids/caps of the bottles/containers of the products we tested (due to the features of the container lids described above), we concluded that tremolite asbestos could not have inadvertently become a part of these homogenized talc products at the level identified as a result of contamination prior to our custody.

27. As for the possibility of intentional post sale contamination, in order for the talc in the Johnson & Johnson product containers to be contaminated with trace amounts of tremolite in a homogeneous manner prior to our custody, it would require an extremely sophisticated operation as might be found in a TEM materials laboratory facility. For example, the tremolite contamination talc operation would require access to a true tremolite standard, an analytical balance and sophisticated mixing equipment to homogenize both the talc and tremolite together. Also, it would require sophisticated TEM analytical analysis to verify that the trace amounts of tremolite fibers in the manufactured tremolitic talc product were consistent with what is expected for this type of material. Lastly, the finished material would have to be put back into the original Johnson & Johnson talc containers, and then be distributed around the country to individuals willing to sell “fake” contaminated talc containers on eBay and to patients with mesothelioma to pass off as their own. Given the incredible unlikelihood of there being such a conspiracy and it being successful, to suggest that the tremolite fibers we detected in the Johnson & Johnson talc samples came from some source, other than from the Johnson & Johnson talc itself, is not a scientifically rational argument.

28. Further, my laboratory's findings of amphibole asbestos in the containers received from law firms and their clients, as well as the concentrations in which the amphiboles were found, are consistent with the finding of amphibole asbestos in the two samples of 1978 Johnson's Baby Powder received from Johnson & Johnson.

29. Based upon my analyses of the products, my review of historic Johnson and Johnson documents and my years of training and experience, it is my expert opinion that it is virtually impossible that either the original talc in the containers of Johnson's Baby Powder and Shower to Shower was removed and replaced with some other talc (which happened to have trace levels of asbestos); or that the asbestos that we found in the containers was added (either intentionally or unintentionally) to the authentic Johnson's Baby Powder and Shower to Shower talc products after they were manufactured and sold.

30. As addressed in my reports, I reiterate that of the thirty-five original talc containers tested by analytical transmission electron microscopy (ATEM), twenty samples were found to contain detectable amounts of amphibole asbestos. For the seventeen positive samples originally reported on in August 2017, amphibole fiber concentrations ranged from 8,690 fibers/gram to 15,100,000 fibers/gram. The additional container of Johnson's Baby Powder received from the Lanier Law Firm and included in the March 2018 supplemental report was also found to contain tremolite asbestos. Further, the two samples of 1978 Johnson's Baby Powder received from Johnson & Johnson taken from the 1978 container contained detectable amounts of amphibole asbestos (ferro-anthophyllite) at a concentration range of between 7,240 fibers/gram to 22,100 fibers/gram while the Joanne Anderson container of Johnson's Baby Powder contained detectable amounts of amphibole asbestos (tremolite) at a concentration of 7,160 fibers/gram.

31. Based on our own testing, as well as my review of historic testing of the talc ore and Johnson & Johnson finished talc products, it is my opinion to a reasonable degree of scientific

certainty that individuals who used Johnson's Baby Powder or Shower to Shower talc products would have, more likely than not, been exposed to fibrous amphibole asbestos. It is further my opinion that ambient or background air does not contain measurable amounts of airborne anthophyllite or tremolite type fibers, unless there is an identifiable source for those fibers. Therefore any exposure to either the tremolite amphibole asbestos series or ferro-anthophyllite asbestos found in these products would be substantially above background. Accordingly, it is my opinion that the asbestos exposure to individuals who used Johnson's Baby Powder or Shower to Shower talc products was substantial and well above background or ambient levels.

32. I have also reviewed Johnson & Johnson's internal TEM Method for the Detection of Asbestiform Minerals (TM 7024) in order to determine if its "limit of detection" allowed considerable amounts of asbestos to pass as "below the limit of detection." Because the method has set its Limit of Quantifiable Detection at "five or more asbestiform minerals of one variety," this allows the analyst to conclude that a sample is "below the limit of quantifiable detection" even if asbestos fibers are seen in a sample; meaning that asbestos fibers observed are unreported, i.e., not communicated. The table below lists various possible findings for the presence of asbestos fibers that details how much asbestos would be present in samples that Johnson & Johnson's TM 7024 would call "Below Detection Limit."

Total Number of Asbestos Fibers found in 10 Grid Openings Examined	Total Asbestos Fiber Concentration Present At Said Number of Asbestos Fibers Found
4 Tremolite fibers	56,800,000 asbestos fibers
4 Tremolite fibers 4 Anthophyllite fibers	113,600,000 asbestos fibers
4 Tremolite fibers 4 Anthophyllite fibers 4 Actinolite fibers	170,400,000 asbestos fibers
4 Tremolite fibers 4 Anthophyllite fibers 4 Actinolite fibers 4 Chrysotile fibers	227,200,000 asbestos fibers

33. I conclude that TM 7024 was designed in such a way as to allow substantial amounts of observed asbestos in talc to pass through as "below detection limit."

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Executed on July 3rd, 2018.

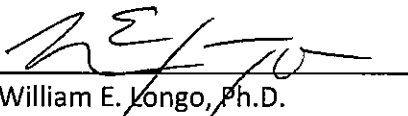

William E. Longo, Ph.D.

Exhibit 89



Tabulation of Asbestos-Related Terminology

By Heather Lowers and Greg Meeker

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

**U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY**

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Abstract

The term asbestos has been defined in numerous publications including many State and Federal regulations. The definition of asbestos often varies depending on the source or publication in which it is used. Differences in definitions also exist for the asbestos-related terms acicular, asbestiform, cleavage, cleavage fragment, fiber, fibril, fibrous, and parting. An inexperienced reader of the asbestos literature would have difficulty understanding these differences and grasping many of the subtleties that exist in the literature and regulatory language. Disagreement among workers from the industrial, medical, mineralogical, and regulatory communities regarding these definitions has fueled debate as to their applicability to various morphological structures and chemical compositions that exist in the amphibole and serpentine groups of minerals. This debate has significant public health, economic and legal implications. This report summarizes asbestos-related definitions taken from a variety of academic, industrial, and regulatory sources. This summary is by no means complete but includes the majority of significant definitions currently applied in the discipline.

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Introduction

Ongoing debate in the asbestos community involves a variety of issues, many of which center around nomenclature. A novice to the asbestos literature would have difficulty grasping the significance and subtleties of the many terms used to describe various asbestos-related mineralogical structures. To confound the issue, many of these terms carry different definitions, depending upon the source that is consulted. The purpose of this report is to give the user a consolidated source of the various definitions that have been put forth and are being used. This report is not intended to endorse any particular definition, but rather point out the variations, differences and inconsistencies that exist in the literature.

The tables in this report present a compilation of definitions that have been put forth by mineralogical, industrial, regulatory, and medical workers over the last thirty years for the terms acicular, asbestiform, asbestos, cleavage, cleavage fragments, fiber, fibril, fibrous, and parting. Some definitions of these terms vary from source to source simply because they are intended for specific application in analytical methods. An example is the term *fiber* that may be defined simply by length and width criteria for the purpose of structure counting. Such a definition may not be applicable to a more general use of the term and should not be broadly applied. A person choosing to read an asbestos-related document should be aware of the intent of the definition in the particular publication.

The information in this report is presented in table format. The first column in each table, headed community, will contain one of five categories: interdisciplinary, industrial, medical, mineralogical, or regulatory (including test methods) based on the discipline of the publication in which the term appears. The second heading gives the year the source was published. This allows the reader to see the evolution, if any, of the terms over the years. The third column gives the complete reference for the source indicated. The fourth column includes the definition(s) for each asbestos-related term that is defined in the source. Each table is titled by the term being defined. In all cases, the

definitions of the terms were taken word for word from the source. Comments by the authors of this report are designated by italicized text enclosed by brackets. The same source was searched for all the terms given in this report. If a term was not defined, located, or used in the source, "NA" will appear in the respective column.

This tabulation is by no means complete, but includes the spectrum of definitions given in the academic, industrial, and regulatory literature. It is clear that there is disagreement and perhaps misunderstanding regarding some of the terminology used by workers in various asbestos-related fields. It is hoped that this report will assist the reader in evaluating and understanding the thousands of asbestos-related documents in the literature. For additional perspectives of the evolution of the terms defined in this report, the reader is referred to the following sources:

Langer, A.M., Rohl, A.N., Wolff, M., Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments: Nomenclature and biological properties, *in* Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.

Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.

National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.

Table 1. Acicular

Community	Year	Source	Acicular
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	NA
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	NA
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA

Table 1. Acicular

Community	Year	Source	Acicular
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	ACICULAR crystals are crystals that are extremely long and thin and have a small diameter. (An acicular crystal is a special type of PRISMATIC crystal. A prismatic crystal has one elongated dimension and two other dimensions that are approximately equal.) As defined by the American Geological Institute (1980), a mineral fragment must be at least three times as long as it is wide to be called acicular. Acicular crystals or fragments are not expected to have the strength, flexibility, or other properties of asbestiform fibers.
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	needlelike
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	Needle-shaped or needlelike. The term is ordinarily applied in mineralogy to straight, greatly elongate, free-standing (individual) crystals bounded laterally, and terminated, by crystal faces. Aggregates of acicular crystals often occur in open, bristly groups. The aspect ratio of acicular crystals is in the same range of those of "fiber" and "fibrous", but the thickness may extend to several millimeters.

Table 1. Acicular

Community	Year	Source	Acicular
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	Having the shape of a needle: <i>acicular crystals</i>
Interdisciplinary	2000	Wyllie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L, eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	NA
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA

Table 1. Acicular

Community	Year	Source	Acicular
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments- Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	NA
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	NA
Mineralogical	1977	Campbell, W.J., Blake, R.L, Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	The shape shown by an extremely slender crystal with small cross-sectional dimensions (a special case of prismatic form). Acicular crystals may be blunt-ended or pointed. The term "needlelike" refers to an acicular crystal with pointed termination at one or both ends.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	[cryst] Said of a crystal that is needlelike in form. Cf: <i>fascicular</i> ; <i>sagenitic</i> .

Table 1. Acicular

Community	Year	Source	Acicular
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	syn. Needle-like fibre, fibrous, hair-like
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	needle-like
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	Slender, needlelike crystals.
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	NA
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	As the length increases relative to the width, the crystals are called acicular.
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	Occurs as needle-like crystals.
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA

Table 1. Acicular

Community	Year	Source	Acicular
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	NA
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	NA
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	NA
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	The shape of an extremely slender crystal with cross-sectional dimensions which are small relative to its length, i.e. needle-like.

Table 1. Acicular

Community	Year	Source	Acicular
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	NA
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	The asbestiform habit is most commonly developed in certain amphiboles and chrysotile, but other minerals also may crystallize with this unusual habit. The habit may be characterized by (1) a fibril structure, single or twinned crystals of very small widths (generally less than 0.5 um), which have grown with a common fiber axis direction, but are disoriented in the other crystallographic directions; (2) anomalous optical properties, primarily parallel extinction; (3) unusual tensile strengths; (4) high aspect ratio; and (5) flexibility.
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	A special type of fibrous habit in which the fibers are separable, and are more flexible and possess higher tensile strength than crystals in other habits of the same mineral.
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	NA

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	ASBESTIFORM HABIT refers to the unusual crystallization habit of a mineral when the crystals are thin, hairlike fibers. Historically, the definition of the asbestiform habit was based primarily on appearance, and the properties were only implied. At present, the definition of asbestiform habit is often augmented to include a statement on the properties of asbestiform fibers, i.e., shape; enhanced strength, flexibility, and durability; diameter-dependent strength; and unique surfaces. The fibers of asbestos are good examples of the asbestiform habit.
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	...a mineral structured in the form of asbestos
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	An adjective used to describe inorganic materials that possess the form and appearance of asbestos (OED, WEB). Asbestine, asbestoid, and asbestos are obsolete synonyms. Asbestiform materials are a subset of fibrous materials. The term should be employed only when the material is one of the minerals mined as asbestos and possesses fibrosity typical of asbestos—that is, with relatively small fiber thickness, flexibility, separability, and general parallel arrangement of fibers en masse. The term asbestiform has also been used to imply that a sample or an individual fiber has morphological (gross external) characteristics similar to those of asbestos, but not necessarily the chemical or other physical properties of asbestos. In the 1700s asbestiform was used for the fibrous members of the amphibole group only. At that time virtually all asbestos in common use was amphibole-asbestos.
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	NA
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples in Beard, M.E. and Rooks, H.L., eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	Asbestiform fibers are those having the crystal structure of the above minerals and having physical characteristics such as (1) mean aspect ratios (length to width) of 20:1 to 100:1 or greater for individual fibers; (2) very thin fibrils usually less than 0.5 um in width; (3) and parallel fibers in bundles with splayed ends, matted masses of fibers, and/or fibers showing curvature.
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	A term used to describe minerals that possess a habit and appearance similar to that displayed by asbestos.
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments-Nomenclature and biological properties, in Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	...denotes an asbestos variety of silicate fiber; it may be used as a synonym for asbestos (Campbell et al., 1979; Zoltai, 1978). Although recommended, a current dictionary of geological terms suggests that asbestiform may be used to describe fibers which merely resemble asbestos (Thrush, 1978)
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	NA
Mineralogical	1977	Campbell, W.J., Blake, R.L, Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	A specific type of mineral fibrosity in which the fibers and fibrils posses high tensile strength and flexibility.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	Said of a mineral that is fibrous, i.e. that is like asbestos.
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr. ,1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	The term asbestiform refers to minerals that are mined as asbestos and possess fibrosity typical of asbestos-that is, with small fiber thickness, flexibility, and separability.

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	...any mineral resembling asbestos is asbestiform
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	When the length is extremely long compared with the width, the crystals are called asbestiform or fibrous.
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	NA
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	The asbestiform habit can be defined as a habit where mineral crystals grow in a single dimension, in a straight line until they form long, thread-like fibers with aspect ratios of 20:1 to 100:1 and higher.

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	(morphology) Said of a mineral that is like asbestos, i.e., crystallized with the habit of asbestos. Some asbestiform minerals may lack the properties which make asbestos commercially valuable, such as long fiber length and high tensile strength. With the light microscope, the asbestiform habit is generally recognized by the following characteristics: 1) Mean aspect ratios ranging from 20:1 to 100:1 or higher for fibers longer than 5 um. Aspect ratios should be determined for fibers, not bundles. 2) Very thin fibrils, usually less than 0.5 micrometers in width, and 3) Two or more of the following: a) Parallel fibers occurring in bundles, b) Fiber bundles displaying splayed ends, c) matted masses of individual fibers, and/or d) Fibers showing curvature. These characteristics refer to the population of fibers as observed in a bulk sample. It is not unusual to observe occasional particles having aspect ratios of 10:1 or less, but it is unlikely that the asbestos component(s) would be dominated by particles (individual fibers) having aspect ratios of <20:1 for fibers longer than 5um. If a sample contains a fibrous component of which most of the fibers have aspect ratios of <20:1 and that do not display the additional asbestiform characteristics, by definition the component should not be considered asbestos.
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	a special type of fibrous habit in which the fibers are separable into thinner fibers and ultimately into fibrils. This habit accounts for greater flexibility and higher tensile strength than other habits of the same mineral.

Table 2. Asbestiform

Community	Year	Source	Asbestiform
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	A specific type of mineral fibrosity in which the fibres and fibrils posses high tensile strength and flexibility.
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	NA
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	A specific type of mineral fibrosity in which the fibers and fibrils possess high tensile strength and flexibility
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 3. Asbestos

Community	Year	Source	Asbestos
Industrial	1975	Winston, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	...is a generic name given to a group of fibrous mineral silicates found in nature. They are all incombustible and can be separated by mechanical means into fibers of various lengths and cross sections, but each differs in chemical composition from the other.
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	...is a generic name given to six fibrous minerals that have been used in commercial products. The six types of asbestos are chrysotile, the most widely used; crocidolite; amosite; anthophyllite asbestos; tremolite asbestos; and actinolite asbestos. The properties that make asbestos so versatile and cost effective are high tensile strength, chemical and thermal stability, high flexibility, low electrical conductivity, and larger surface area.
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	The term "asbestos" is a nonscientific commercial term normally restricted in use to the long, threadlike fibrous varieties of several hydrated silicate minerals, whose fibers can be separated mechanically and pressed, spun, or woven into articles of all types that are resistant to heat and chemical alteration. Although present usage is generally limited to the commercially available silicate minerals, chrysotile, crocidolite, amosite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos, other minerals regardless of chemical composition, which possess similar qualities of great elongation, flexibility, high-tensile strength, heat and chemical resistance, spinability, etc., could properly be classified as asbestos.
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	A collective mineralogical term which includes the asbestiform varieties of various (silicate) minerals.

Table 3. Asbestos

Community	Year	Source	Asbestos
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	Asbestos is a term used to describe a number of minerals which have the property that they can be separated into long silky fibres.
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	[<i>Author quotes the federal register</i>] 1. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite. 2. "Asbestos fibers" means asbestos fibers longer than 5 micrometers.
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	[<i>uses Code of Federal Regulations</i>] "asbestos" is recognized as generic, applicable to a number of hydrated silicates, but its use is specifically limited to describe the minerals chrysotile, amosite, crocidolite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos.
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	...meaningful working definition of asbestos, we propose the following: 1. For routine method, a minimum aspect ratio of 10:1 should be used in a screening analysis or survey. Existing data indicate that this would not affect the chrysotile analysis at all and amphibole analysis only when the sample contains a significant percentage of acicular nonasbestos particles [11-16]. While this would undoubtedly result in missing 5 to 20 percent of the short asbestos particles, it would eliminate 70 to 80 percent of the nonasbestos particles from consideration. 2. A lower length limit for routine electron microscope analysis should be adopted. On the basis of available information, a reasonable limit would be somewhere between 0.75 and 2.0 microns [3]. 3. Asbestos analyses should be grouped into at least three size fractions and acceptable uncertainty levels defined for each range. For example, the length categories less than 2, 2 to 5, and greater than 5 um might be chosen, and a 50 percent relative error defined as the minimum level of acceptance for each size range.

Table 3. Asbestos

Community	Year	Source	Asbestos
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	The term ASBESTOS is a commercial-industrial term rather than a mineralogical term. It refers to well-developed and hairlike long-fibered varieties of certain minerals that satisfy particular industrial needs. Table 2-1 lists the names of chemical formulas of the minerals included in the term asbestos. Other minerals used in industry, such as palygorskite, may also crystallize as well-developed, thin hairlike fibers (i.e., in the asbestiform habit), but they are not called asbestos. [<i>Minerals listed in Table 2-1: chrysotile, riebeckite, anthophyllite, cummingtonite-grunerite, actinolite-tremolite</i>]
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes in Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	...a generic term for naturally occurring inorganic hydrated silicates, occurring in layered structures composed of chains of silicon/oxygen tetrahedra, which can subdivide into flexible fibers
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos in Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	...a term applied to six naturally occurring minerals exploited commercially for their desirable physical properties, which are in part derived from their asbestiform habit. The six minerals are the serpentine mineral chrysotile and the amphibole minerals grunerite asbestos (also referred to as amosite), riebeckite asbestos (also referred to as crocidolite), anthophyllite asbestos, tremolite asbestos, and actinolite asbestos... Individual mineral particles, however processed and regardless of their mineral name, are not demonstrated to be asbestos if the length-to-width ratio is less than 20:1.

Table 3. Asbestos

Community	Year	Source	Asbestos
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	A commercial and generally used name for fibrous varieties of naturally occurring silicate minerals of the amphibole or serpentine group (see chapter 2). Over the millennia many fibrous minerals have been called asbestos, including the six minerals presently accepted (see in the following), as well as other silicates such as palygorskite and nonsilicates such as brucite. The characteristics of mineral materials that have invoked the use of the term asbestos are: slender fibers that are easily separable and flexible, and fine fibers that have high tensile strength, chemical stability, and are incombustible. Natural unprocessed asbestos fibers have large aspect ratios and may have lengths of microscopic dimensions up to, in rare instances, a meter or so. Chrysotile-asbestos fibers are commonly 10 centimeters in length...Asbestos is used as an adjective in combination with numerous other words and phases, such as asbestos cement.
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	"Asbestos" is a broad commercial term for a group of naturally occurring hydrated silicates that crystallize in a fibrous habit.
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	n. Either of two incombustible, chemical-resistant, fibrous mineral forms of impure magnesium silicate, used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters.
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L, eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA

Table 3. Asbestos

Community	Year	Source	Asbestos
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	Asbestos is a commercial term for long, thin mineral fibers of chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite.
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	A commercial term that describes a group of extremely thin and flexible minerals that have a unique combination of physical and chemical properties. The long asbestos fibers can be spun in yarn and then made into woven fabric. Asbestos is derived from a Greek word meaning inextinguishable in the sense of indestructible, because asbestos cannot be destroyed by fire. Modern usage in mineralogy occurred when the term was applied to a fibrous amphibole mineral discovered in the Alps.
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	Asbestos refers to a group of inorganic silicates which occur naturally and have a distinct fibrous crystalline structure, which is largely responsible for its unique properties: tensile strength, stiffness, heat resistance, and ability to split into finer fibres.
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments-Nomenclature and biological properties, in Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	The term "asbestos" may be used to describe a mineral species only when its physical characteristics, on the megascopic level, are known: the mineral fiber possesses tensile strength, flexibility, and those other characteristics which distinguishes asbestiform minerals from their rock-forming analogues. Asbestos may also be applied to submicroscopic fibers if the source materials are known; for example, in an asbestos textile factory where chrysotile fiber is used.
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	...refers to a group of naturally occurring fibrous metallic silicates that have been used widely in construction and industry.

Table 3. Asbestos

Community	Year	Source	Asbestos
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	...is a generic name given to a class of natural fibrous silicates that vary considerably in their physical and chemical properties.
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	Asbestos. Asbestos. Tremolite, actinolite, and other varieties of amphibole, excepting those containing much alumina, pass into fibrous varieties, the fibers of which are sometimes very long, fine, flexible, and easily separable by the fingers and look like flax. These kinds are called asbestos.
Mineralogical	1977	Campbell, W.J., Blake, R.L., Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	(1) A collective mineralogical term encompassing the asbestiform varieties of various minerals; (2) an industrial product obtained by mining and processing primarily asbestiform minerals.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	(a) A commercial term applied to a group of highly fibrous silicate minerals that readily separate into long, thin, strong fibers of sufficient flexibility to be woven, are heat resistant and chemically inert, and possess a high electric insulation, and therefore are suitable for uses (as in yarn, cloth, paper, paint, brake linings, tiles, insulation, cement, fillers, and filters) where incombustible, nonconducting, or chemically resistant material is required. (b) A mineral of the asbestos group, principally chrysotile (best adapted for spinning) and certain fibrous varieties of amphibole (esp. tremolite, actinolite, and crocidolite). (c) A term strictly applied to the fibrous variety of actinolite.--Syn: <i>asbestos</i> ; <i>amianthus</i> ; <i>earth flax</i> ; <i>mountain flax</i> .
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	In this study, only specimens [<i>in reference to calcic amphiboles</i>] which occur as bundles of fibres (commonly having splayed ends), which readily split into still finer sub-microscopic units (fibrils), are referred to and are classed as asbestos.

Table 3. Asbestos

Community	Year	Source	Asbestos
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, <i>Asbestos and other fibrous materials</i> : New York, N.Y., Oxford, 204 p.	NA
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, <i>Manual of mineralogy</i> (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	The characteristic morphology of all asbestos minerals, in their natural form, is a parallel-sided fiber with a length to width ratio (referred to as an aspect ratio) in excess of 100:1 (Champness, P.E., Cliff, G. and Lorimer, G.W., 1976, The identification of asbestos, <i>Journal of Microscopy</i> , v. 108, pp. 231-249).
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, <i>Mineralogy of amphiboles and 1:1 layer silicates</i> in Guthrie Jr., G.D. and Mossman, B.T., eds., <i>Health effects of mineral dusts: Reviews in Mineralogy</i> , v. 28, p. 61-137,	Asbestos is defined as a group of highly fibrous silicate minerals that readily separate into long, thin, strong fibers that have sufficient flexibility to be woven, are heat resistant and chemically inert, are electrical insulators, and therefore are suitable for uses where incombustible, nonconducting, or chemically resistant material is required.
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	...is a generic name given to the fibrous variety of six naturally occurring minerals that have been used in commercial products. Asbestos is made up of fiber bundles. These bundles, in turn, are composed of extremely long and thin fibers that can be easily separated from one another. The bundles have splaying ends and are extremely flexible. The term "asbestos" is not a mineralogical definition. It is a commercial designation for mineral products that possess high tensile strength, flexibility, resistance to chemical and thermal degradation, and high electrical resistance and that can be woven.
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	...is a generic term for a number of hydrated silicates that, when crushed or processed, separate into flexible fibers made up of fibrils.
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	Asbestos fibers are defined as those particles with a length greater than 5 um and a length-to-diameter ratio of 3:1, or greater.
Regulatory	1983	29 CFR 1910.1001	For the purpose of this section, (1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

Table 3. Asbestos

Community	Year	Source	Asbestos
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	"Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite tremolite.
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	A term for naturally occurring fibrous minerals. Asbestos includes chrysotile, cummingtonite-grunerite asbestos (amosite), anthophyllite asbestos, tremolite asbestos, crocidolite, actinolite asbestos and any of these minerals which have been chemically treated or altered. The precise chemical formulation of each species varies with the location from which it was mined.
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	A commercial term applied to the asbestiform varieties of six different minerals. The asbestos types are chrysotile (asbestiform serpentine), amosite (asbestiform grunerite), crocidolite (asbestiform riebeckite), and asbestiform anthophyllite, asbestiform tremolite, and asbestiform actinolite. The properties of asbestos that caused it to be widely used commercially are: 1) its ability to be separated into long, thin flexible fibers; 2) high tensile strength; 3) low thermal and electrical conductivity; 4) high mechanical and chemical durability, and 5) high heat resistance.
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	...is a widely used, mineral-based material that is resistant to heat and corrosive chemicals. Typically, asbestos appears as a whitish, fibrous material which may release fibers that range in texture from coarse to silky; however, airborne fibers that can cause health damage may be too small to see with the naked eye.
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	...a collective term that describes a group of naturally occurring, inorganic, highly fibrous, silicate dominated minerals, which are easily separated into long, thin, flexible fibers when crushed or processed.

Table 3. Asbestos

Community	Year	Source	Asbestos
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	A term applied to a group of silicate minerals belonging to the serpentine and amphibole groups which have crystallized in the asbestiform habit, causing them to be easily separated into long, thin, strong fibres when crushed or processed. The Chemical Abstracts Service Registry Numbers of the common asbestos varieties are: chrysotile (12001-29-5), crocidolite (12001-28-4), grunerite asbestos (amosite) (12172-73-5), anthophyllite asbestos (77536-67-5), tremolite asbestos (77536-68-6) and actinolite asbestos (77536-66-4).
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	means asbestiform varieties of chrysotile, amosite (cummingtonite-grunerite), crocidolite, anthophyllite, tremolite, and actinolite.
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	A term for naturally occurring fibrous minerals. Asbestos includes chrysotile, cummingtonite-grunerite asbestos (amosite), anthophyllite asbestos, tremolite asbestos, crocidolite, actinolite asbestos and any of these minerals which have been chemically treated or altered. The precise chemical formulation of each species varies with the location from which it was mined...
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	Asbestos. Any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cummingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	...means the asbestiform varieties of: Chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite; and actinolite.
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

Table 3. Asbestos

Community	Year	Source	Asbestos
Regulatory	2001	30 CFR 56.5001	..."Asbestos" is a generic term for a number of hydrated silicates that, when crushed or processed, separate into flexible fibers made up of fibrils. Although there are many asbestos minerals, the term "asbestos" as used herein is limited to the following minerals: chrysotile, amosite, crocidolite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos.
Regulatory	2001	17 CCR (California Code of Regulations) 93105	"Asbestos" means asbestiforms* of the following minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite-grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite. <i>*[It is assumed that the authors of the above entry intended for the word "asbestiforms" to be interpreted as asbestiform varieties of these minerals. This unusual application of the term would probably not be considered appropriate by most workers in the mineralogical community.]</i>
Regulatory	2001	West Virginia Code 16-32-2	Asbestos means the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite and actinolite.
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	"Asbestos" means the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite and tremolite.
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	"Asbestos" means the asbestiform varieties of chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

Table 4. Cleavage

Community	Year	Source	Cleavage
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	NA
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	A mineral has cleavage if it breaks along definite plane surfaces.
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA

Table 4. Cleavage

Community	Year	Source	Cleavage
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	CLEAVAGE refers to the preferential breakage of crystals along certain planes of structural weakness. Such planes of weakness are called cleavage planes. A mineral with two distinct cleavage planes will preferentially fracture along these planes and will produce ACICULAR fragments...The strength and flexibility of cleavage fragments are approximately the same as those of single crystals. Cleavage cannot produce the high strength and flexibility of asbestiform fibers.
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	NA
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	The property of an individual crystal to fracture or break, producing planar surfaces along specific crystallographic directions dictated by the structure of the material. Some crystals lack cleavage; others possess one or more crystallographically distinct cleavage directions (see chapter 1).
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA

Table 4. Cleavage

Community	Year	Source	Cleavage
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	1. Mineralogy. The splitting or tendency to split of a crystallized substance along definite crystalline planes, yielding smooth surfaces.
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L, eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	weakness inherent in a "perfect" structure
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	NA
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments- Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	...in minerals is normally defined as planar separation occurring along crystallographic planes with the lowest surface energies.

Table 4. Cleavage

Community	Year	Source	Cleavage
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	...is a fracture yielding a more or less smooth surface in the crystal, usually along one of the principal planes of the lattice. The cleavage is characterized by the plane, the ease of production and the character of the surface
Mineralogical	1977	Campbell, W.J., Blake, R.L, Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	The tendency of a crystal to break in definite directions that are related to the crystal structure and are always parallel to possible crystal faces.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	[mineral] The breaking of a mineral along its crystallographic planes, thus reflecting crystal structure. The types of cleavage are named according to the structure, e.g. prismatic cleavage. Cf: fracture [mineral]; parting [cryst].
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA

Table 4. Cleavage

Community	Year	Source	Cleavage
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	...is the tendency of minerals to break parallel to atomic planes that are identified by Miller indices, just as the faces of the external form of a crystal
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	Cleavage refers to breakage of a mineral on an approximately planar surface that is controlled by its crystal structure.
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	NA
Mineralogical	2002	http://webmineral.com/help/Fracture.html	If a mineral is strained beyond its elastic limits, it will break. If it breaks irregularly then it shows fracture, if it breaks along regular surfaces related to the crystal structure then it shows cleavage. This cleavage depends on weaknesses in the crystalline make-up of the mineral and is a diagnostic property which can reveal additional information about the mineral.
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	NA
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA

Table 4. Cleavage

Community	Year	Source	Cleavage
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	NA
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	NA
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	The breaking of a mineral along one of its crystallographic directions.
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	NA

Table 4. Cleavage

Community	Year	Source	Cleavage
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	NA
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	NA
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	...The strength and flexibility of cleavage fragments are approximately the same as those of single crystals. Cleavage cannot produce the high strength and flexibility of asbestiform fibers.
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	NA
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L., eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	Cleavage fragments are mineral particles which are similar to asbestiform fibers but have low aspect ratios.
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments-Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	NA
Mineralogical	1977	Campbell, W.J., Blake, R.L, Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	A fragment produced by the breaking of crystals in directions that are related to the crystal structure and are always parallel to possible crystal faces.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	A fragment of a crystal that is bounded by cleavage faces.
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	NA
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	NA
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	NA
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	Mineral particles formed by the comminution of minerals, especially those characterized by relatively parallel sides and moderate aspect ratio.
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	NA
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	NA
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	A fragment of a crystal that is bounded by cleavage faces.
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA

Table 5. Cleavage Fragment

Community	Year	Source	Cleavage Fragment
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	Mineral particles formed by the comminution of minerals, especially those characterized by parallel sides and moderate aspect ratio (usually less than 20:1).
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 6. Fiber

Community	Year	Source	Fiber
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	The term "fiber" connotes a greatly elongated particle with threadlike qualities such as high-tensile strength, flexibility, spinability, etc.
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	An acicular single crystal, or a similarly elongated polycrystalline aggregate, which displays some resemblance to organic fibers.
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	NA
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	[Author uses Code of Federal Regulations] "fiber" is defined as any particulate with a three to one or greater length to width aspect ratio, and a length of five micrometers or longer.

Table 6. Fiber

Community	Year	Source	Fiber
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	Fibers are defined as all fragments having aspect ratios greater than 3:1, with lengths exceeding 5 um and having diameters smaller than 3 um.
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	The term MINERAL FIBERS has traditionally referred to crystals whose appearance and properties resembled organic fibers, such as hair and cotton. In some recent literature, however, the term sometimes refers only to the appearance of the material, and there can be confusion about whether particular properties are also implied.
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	NA
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	...inorganic fibers in a general sense: as small elongate solid objects composed of any compound or element; usually nonbiologic in origin and often exhibiting distinctive physical, especially mechanical, properties. Inorganic fibers can occur naturally, that is, as mineral fibers or can be produced synthetically.
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA

Table 6. Fiber

Community	Year	Source	Fiber
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	NA
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L, eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	NA
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments-Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	NA

Table 6. Fiber

Community	Year	Source	Fiber
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	NA
Mineralogical	1977	Campbell, W.J., Blake, R.L, Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	(mineral fiber) The smallest elongated crystalline unit that can be separated from a bundle or appears to have grown individually in that shape, and that exhibits a resemblance to organic fibers. (Examples: fiber bundles, chrysotile, and crocidolite; individual fibers, epsomite and millerite.)
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	An elongated, tapering, thick-walled strengthening cell occurring in various parts of vascular plants (Esau, 1953).
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA

Table 6. Fiber

Community	Year	Source	Fiber
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	A long, thin thread or threadlike solid with distinctive elongate shape that may be natural or synthetic and organic or inorganic in composition. The properties of flexibility and toughness are also implied, especially to the layperson, but are not essential to the definition. The dimensions of an object called a fiber are usually unspecified and may range from the visible (diameter about a millimeter, and a length many times the thickness) to a particle that can be observed only with the aid of a light or an electron microscope (magnification greater than X50,000). The physical dimensions of vegetable fibers such as flax, hemp, or cotton; animal fibers such as wood, silk, and hair; mineral fibers, such as asbestos; and synthetic fibers such as nylon and glass usually have diameters between 1 and 500 micrometers and lengths between 10 and 1000 micrometers. Inorganic fibers may be flexible and elastic or stiff and brittle, and they commonly occur as aggregates or fibrous bundles. Most mineralogists apply the term when the aspect ratio of a mineral sample, individual or aggregate, is at least 10.
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	NA
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	NA
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	NA
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	...a mineral which is at least three times as long as it is wide

Table 6. Fiber

Community	Year	Source	Fiber
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	Asbestos fibers are defined as those particles with a length greater than 5 um and a length-to-diameter ratio of 3:1, or greater.
Regulatory	1983	29 CFR 1910.1001	(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	A particle longer than or equal to 5 um with a length to width ratio greater than or equal to 3:1. This may include cleavage fragments.
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	With reference to asbestiform morphology, a structure consisting of one or more fibrils.
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	a structure having a minimum length of 0.5 um, an aspect ratio of 5:1 or greater, and substantially parallel sides

Table 6. Fiber

Community	Year	Source	Fiber
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	(fibre) An elongated particle which has parallel or stepped sides. For the purposes of this International Standard, a fibre is defined to have an aspect ratio equal to or greater than 5:1 and a minimum length of 0.5 um.
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	A particle that is 5 um or longer, with a length-to-width ratio of 3 to 1 or longer.
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	A structure greater than or equal to 0.5 um in length with an aspect ratio (length to width) of 5:1 or greater and having substantially parallel sides.
Regulatory	2001	29 CFR 1910.1001	Fiber means a particulate form of asbestos 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 7. Fibril

Community	Year	Source	Fibril
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	A fibril is single or twinned crystal with a very small width, generally less than 0.5 um, and an extremely high aspect ratio; bundle of fibrils may have lengths reaching into the cm.
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	NA
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	NA

Table 7. Fibril

Community	Year	Source	Fibril
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	NA
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	...a single crystal in the form of a fiber
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA

Table 7. Fibril

Community	Year	Source	Fibril
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	A small fiber or the subdivision of a fiber (OED); also a small thread or fiber (WEB). The term is usually employed to describe an elongate unit whose dimensions are smaller than fiber (fine-fibrous) and may be used to designate one member of a fibrous mineral aggregate, regardless of the size of the individual particles or the aggregate. In the latter usage, the implication is that a fibril is the smallest unit that expresses the characteristics of a fiber or fibrous mass, and usually that the fibril is separable by subdivision parallel to the length of the fiber. For example, chrysotile asbestos could theoretically be disaggregated to tubular individual fibrils with diameters in the range of 200 Å. The term fibril therefore has an ultimate lower limit. Fibril is also related to the term polymer, which is defined as a chemical compound or mixture of compounds formed by polymerization and consisting of essentially repeating structural units, usually producing giant chainlike macromolecules. Such a molecule is characterized by highly asymmetric geometry and anisotropic properties. If a solid is formed from polymers, a fibril would be the smallest polymeric unit.
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	1. A small slender fiber or filament
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L, eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA

Table 7. Fibril

Community	Year	Source	Fibril
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	NA
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	Chrysotile having a high magnesium content can be described as a sheet silicate in which the flat structure is rolled about an axis to form a narrow tube (termed fibril) possessing both strength and flexibility.
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments-Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	NA
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA

Table 7. Fibril

Community	Year	Source	Fibril
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	NA
Mineralogical	1977	Campbell, W.J., Blake, R.L, Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	A single fiber, which cannot be separated into smaller components without losing its fibrous properties or appearances.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	NA
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	NA

Table 7. Fibril

Community	Year	Source	Fibril
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	Fibrils are single, elementary fibers that have very small width.
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	NA
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	NA
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	The individual unit of structure of fibers.

Table 7. Fibril

Community	Year	Source	Fibril
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	a single fiber that cannot be separated into smaller components without losing its fibrous properties or appearance.
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	A single fibre of asbestos, which cannot be further separated longitudinally into smaller components without losing its fibrous properties or appearances.
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	NA
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA

Table 7. Fibril

Community	Year	Source	Fibril
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 8. Fibrous

Community	Year	Source	Fibrous
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	The descriptive term used for a mineral which is composed of parallel, radiating or interlaced aggregates of fibers, from which the fibers are usually separable.
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	NA

Table 8. Fibrous

Community	Year	Source	Fibrous
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	FIBROUS refers to (1) single crystals that resemble organic fibers such as hair or cotton and (2) large crystals or crystalline aggregates that look like they are composed of fibers (i.e., long, thin, needlelike elements) (Dana and Ford, 1932). The apparent fibers do not need to be separable. If the fibers are separable and are strong and flexible, they are ASBESTIFORM. If they have the normal strength and brittleness of the mineral, they are ACICULAR. If the apparent fibers are not separable, the specimen may be a single crystal or a multiple (polycrystalline) aggregate displaying a fibrous pattern (resulting, for example, from striation or pseudomorphic replacement of an initially fibrous mineral).
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	fibrous particulate-fibers, fiber fragments, and fiber agglomerates
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA

Table 8. Fibrous

Community	Year	Source	Fibrous
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	Full of fibers, or formed of fibers (OED), with dimensions unspecified but implied, by comparison, to be similar to the natural materials thread and hair (see Fiber). Aggregates of any size of individual fibers may form relatively thick fibrous bundles, thus becoming visible to the naked eye.
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	1. Having, consisting of, or resembling fibers.
Interdisciplinary	2000	Wylie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L., eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	NA
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	NA
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA

Table 8. Fibrous

Community	Year	Source	Fibrous
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments- Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	NA
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	NA
Mineralogical	1977	Campbell, W.J., Blake, R.L., Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	The occurrence of a mineral in bundles of fibers, resembling organic fibers in texture, from which the fibers can usually be separated (for example, satin-spar and chrysotile).
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	The term fibrous is used in a general mineralogical way to describe any aggregates of grains that crystallize in a needlelike habit and appear to be composed of fibers.
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	Said of the habit of a mineral, and of the mineral itself (e.g. asbestos), that crystallizes in elongated thin, needle-like grains, or fibers.

Table 8. Fibrous

Community	Year	Source	Fibrous
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	Aggregate of slender fibers, parallel or radiating
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	NA
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	When the length is extremely long compared with the width, the crystals are called asbestiform or fibrous.
Mineralogical	2002	http://webmineral.com/help/Fracture.html	[About <i>fibrous fracture</i>] Thin, elongated fractures produced by crystal forms or intersecting cleavages (e.g. asbestos).
Mineralogical	2002	http://webmineral.com/help/Habits.html	[About <i>mineral habit</i>] Crystals made up of fibers.
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA

Table 8. Fibrous

Community	Year	Source	Fibrous
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	NA
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	NA
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	...of a mineral composed of parallel, radiating, or interlaced aggregates of fibers, from which the fibers are sometimes separable. That is, the crystalline aggregate may be referred to as fibrous even if it is not composed of separable fibers, but has that distinct appearance. The term fibrous is used in a general mineralogical way to describe aggregates of grains that crystallize in a needle-like habit and appear to be composed of fibers. Fibrous has a much more general meaning than asbestos. While it is correct that all asbestos minerals are fibrous, not all minerals having fibrous habits are asbestos.

Table 8. Fibrous

Community	Year	Source	Fibrous
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	(fibrous structure) A fibre, or connected grouping of fibres, with or without other particles.
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	NA
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA

Table 9. Parting

Community	Year	Source	Parting
Industrial	1975	Winson, R.W., 1975, Asbestos, <i>in</i> , Industrial minerals and rocks (nonmetallics other than fuels): New York, N.Y., American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., p. 379-425.	NA
Industrial	1981	Steel, E. and Wylie, A., 1981, Mineralogical characteristics of asbestos <i>in</i> Riordon, P.H. ed, Geology of Asbestos Deposits, Society of Mining Engineers, p. 93-100.	NA
Industrial	1998	Virta, R.L., 2002, Asbestos: U.S. Geological Survey Open File-Report 02-149, 35 p.	NA
Interdisciplinary	1974	Thompson, C.S., 1974, Discussion of the mineralogy of industrial talcs: U.S. Bureau of Mines Information Circular 8639, p. 22-42.	NA
Interdisciplinary	1978	Zoltai, Tibor, 1978, History of asbestos-related mineralogical terminology: National Bureau of Standards Special Publication 506, p. 1-18.	NA
Interdisciplinary	1979	Chatfield, E.J., 1979, Measurement of asbestos fibres in the workplace and in the general environment <i>in</i> Ledoux, R.L., Mineralogical techniques of asbestos determination: Mineralogical Association of Canada Short Course, v. 4, p. 111-157.	NA
Interdisciplinary	1980	Dixon, W.C., 1980, Applications of optical microscopy in analysis of asbestos and quartz, <i>chap 2 of</i> Dollberg, D.D. and Werstuyft, A.W., eds., Analytical techniques in occupational health chemistry: Washington, D.C., American Chemical Society, p. 13-41.	When a mineral breaks along a plane of structural weakness it exhibits parting.
Interdisciplinary	1980	Clark, R.L., 1982, MSHA standard method for fiber identification by electron microscopy: National Bureau of Standards Special Publication 619, p. 207-210.	NA

Table 9. Parting

Community	Year	Source	Parting
Interdisciplinary	1980	Lee, R.J., Kelly, J.F., and Walker, J.S., 1982, Considerations in the analysis and definition of asbestos using electron microscopy: National Bureau of Standards Special Publication 619, p. 132-137.	NA
Interdisciplinary	1980	Chatfield, E.J. and Lewis, G.M., 1980, Development and application of an analytical technique for measurement of asbestos fibers in vermiculite: Scanning Electron Microscopy, p. 329-340.	NA
Interdisciplinary	1984	National Research Council, 1984, Asbestiform fibers-nonoccupational health risks: Washington D.C., National Academy Press, p. 25-47.	NA
Interdisciplinary	1984	Cossette, M., 1984, Defining asbestos particulates for monitoring purposes <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, p. 5-49.	NA
Interdisciplinary	1984	Ross, M., Kuntze, R.A., and Clifton, R.A., 1984, A definition for asbestos <i>in</i> Levadie, B. ed., Definitions for asbestos and other health-related silicates: ASTM Special Technical Publication 834, pp.139-147.	NA
Interdisciplinary	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Interdisciplinary	1990	Mossman, B.T., Bignon, J., Corn, M., Seaton, A., and Gee, J.B.L., 1990, Asbestos-scientific developments and implications for public policy: Science, v. 247, p. 294-301.	NA
Interdisciplinary	2000	The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	NA

Table 9. Parting

Community	Year	Source	Parting
Interdisciplinary	2000	Wyllie, A.G., 2000, The habit of asbestiform amphiboles: implications for the analysis of bulk samples <i>in</i> Beard, M.E. and Rooks, H.L., eds., Advances in environmental measurement methods for asbestos: ASTM Special Technical Publication 1342, p. 53-69.	Structural defects produce planes of weakness called parting
Interdisciplinary	2001	Beard, M.E., Crankshaw, O.S., Ennis, J.T., and Moore, C.E., 2001, Analysis of crayons for asbestos and other fibrous materials, and recommendations for improved analytical definitions: Research Triangle Park, North Carolina, Research Triangle Institute, Center for Environmental Measurements and Quality Assurance, Earth and Mineral Sciences Department, [informal report], 23 p., plus appendices A-H.	NA
Interdisciplinary	2001	Nolan, R.P., Langer, A.M., Ross, M., Wicks, F.J., and Martin, R.F., eds., 2001, The health effects of chrysotile asbestos-contribution of science to risk-management decisions: The Canadian Mineralogist Special Publication 5, 304 p.	NA
Medical	1977	Zielhuis, R.L., 1977, Public health risks of exposure to asbestos: Elmsford, N.Y., Pergamon Press Inc., 143 p.	NA
Medical	1979	Langer, A.M., Rohl, A.N., Wolff, M., and Selikoff, I.J., 1979, Asbestos, fibrous minerals and acicular cleavage fragments-Nomenclature and biological properties, <i>in</i> Lemen, R. and Dement, J.M., eds., Dust and disease: Park Forest South, Ill., Pathotox Publishers, p. 1-22.	NA

Table 9. Parting

Community	Year	Source	Parting
Medical	1998	Blake, T., Castranova, V., Schwegler-Berry, D., Baron, P., Deye, G.J., Li, C., and Jones, W., 1998, Effect of fiber length on glass microfiber cytotoxicity: Journal of Toxicology and Environmental Health, v. 54, p. 243-259.	NA
Medical	2001	Ninth Report on Carcinogens, January 2001 http://ehp.niehs.nih.gov/roc/ninth/known/asbestos.pdf	NA
Mineralogical	1914	Dana, E.S., 1914, The system of mineralogy of James Dwight Dana, descriptive mineralogy (6th ed): New York, N.Y., Wiley, p.	...is applied to a separation which is not produced along a plane of minimum cohesion in the lattice but is produced by lamellar twinning, by directed pressure exerted on the crystal, or by oriented inclusions which develop planes of weakness. Parting, in some instances, does not conform to the symmetry requirements of the crystal.
Mineralogical	1977	Campbell, W.J., Blake, R.L., Brown, L.L., Cather, E.E., and Sjober, J.J., 1977, Selected silicate minerals and their asbestiform varieties: U.S. Bureau of Mines Information Circular 8751, 56 p.	The tendency of a crystal or grain to break along crystallographic planes weakened by inclusions or structural defects. Different specimens of the same mineral may or may not exhibit parting. Twinned crystals often part along composition planes, which are lattice planes and therefore, potential crystal faces. Parting is similar to cleavage.
Mineralogical	1979	Campbell, W.J., Steel, E.B., Virta, R.L., and Eisner, M.H., 1979, Relationship of mineral habit to size characteristics for tremolite cleavage fragments and fibers: U.S. Bureau of Mines Report of Investigations 8367, 18 p.	NA
Mineralogical	1980	Bates, R.L., and Jackson, J.A., eds., 1980, Glossary of geology (2d ed.): Falls Church, Va., American Geological Institute, 749 p.	[crystal] The breaking of a mineral along planes of weakness caused by deformation or twinning; e.g. garnet. Cf: cleavage [mineral].
Mineralogical	1982	MacKenzie, W.S., Donaldson, C.H., and Guilford, C., 1982, Atlas of igneous rocks and their textures: New York, N.Y., Wiley, p. 20.	NA
Mineralogical	1987	Dorling, M. and Zussman, J., 1987, Characteristics of asbestiform and non-asbestiform calcic amphiboles: Lithos, v. 20, p. 469-489.	NA

Table 9. Parting

Community	Year	Source	Parting
Mineralogical	1988	Skinner, H.C., Ross, M., and Frondel, C., 1988, Asbestos and other fibrous materials: New York, N.Y., Oxford, 204 p.	NA
Mineralogical	1993	Klein, C. and Hurlbut, C.S., Jr., 1993, Manual of mineralogy (after James D. Dana) (21st ed.): New York, N.Y., Wiley, 681 p.	When minerals break along planes of structural weakness. The weakness may result from pressure or twinning or exsolution; and, because it is parallel to rational crystallographic planes, it resembles cleavage.
Mineralogical	1993	Veblen, D.R. and Wylie, A.G., 1993, Mineralogy of amphiboles and 1:1 layer silicates in Guthrie Jr., G.D. and Mossman, B.T., eds., Health effects of mineral dusts: Reviews in Mineralogy, v. 28, p. 61-137,	Parting refers to approximately planar breakage along planes that are not cleavage planes.
Mineralogical	2001	Virta, R.L., 2001, Some facts about asbestos: U.S. Geological Survey Fact Sheet FS-012-01, 4 p.	NA
Mineralogical	2002	http://webmineral.com/help/Fracture.html	NA
Mineralogical	2002	http://webmineral.com/help/Habits.html	NA
Regulatory	1974	U.S. District Court, district of Minnesota, 5th Division. Supplemental Memorandum. No. 5-72, Civil 19, Appendix 5, May 11, 1974, p. 24	NA
Regulatory	1976	National Institute for Occupational Safety and Health, 1976, Revised recommended asbestos standard: DHEW (NIOSH) Publication No. 77-169, 96 p.	NA
Regulatory	1983	29 CFR 1910.1001	NA
Regulatory	1990	Ohio Administrative Code (OAC) 3745-20-01	NA
Regulatory	1992	Crane, D., 1992, Polarized light microscopy of asbestos: Occupational Safety and Health Administration Method # ID-191.	NA
Regulatory	1992	Occupational Safety and Health Administration, 1992, Preambles IV. Mineralogical Considerations, National Stone Association and American Mining Congress	NA

Table 9. Parting

Community	Year	Source	Parting
Regulatory	1993	Perkins, R.L. and Harvey, B.W., 1993, Method for the determination of asbestos in bulk building materials: U.S. Environmental Protection Agency EPA/600/R-93/116, Office of Research and Development, Washington, D.C.	NA
Regulatory	1993	Occupational Safety and Health Administration, 1993, Better protection against asbestos in the workplace: U.S. Department of Labor Fact Sheet No. OSHA 93-06. Available on the world wide web at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=144	NA
Regulatory	1995	American Society for Testing and Materials, 1995, Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos structure number concentrations: West Conshohocken, Pa., ASTM 5755-95, 13 p.	NA
Regulatory	1995	International Organization for Standardization, 1995, ISO 10312 Ambient air-determination of asbestos fibres-direct-transfer transmission electron microscopy method (1st ed): Geneve, Switzerland, International Organization for Standardization, 51 p.	NA
Regulatory	1996	Colorado Air Quality Control Commission, 1996, Part B-emission standards for asbestos, <i>excerpted from</i> Regulation No. 8 "The control of hazardous air pollutants": Colorado Department of Public Health and Environment, 114 p.	NA
Regulatory	1997	Crane, D., 1997, Asbestos in air: Occupational Safety and Health Administration Method # ID-160.	NA

Table 9. Parting

Community	Year	Source	Parting
Regulatory	1997	NYCRR (New York Code of Rules & Regulations) Title 10 Section 73.1	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools (7-1-01 Edition)	NA
Regulatory	2001	Environmental Protection Agency Part 763-Asbestos Subpart E--Asbestos-Containing Materials in Schools Appendix A (7-1-01 Edition)	NA
Regulatory	2001	29 CFR 1910.1001	NA
Regulatory	2001	30 CFR 56.5001	NA
Regulatory	2001	17 CCR (California Code of Regulations) 93105	NA
Regulatory	2001	West Virginia Code 16-32-2	NA
Regulatory	2002	OAR (Oregon Administrative Rules) 340-248-0010	NA
Regulatory	2002	105 ILCS (Illinois Compiled Statutes Schools) 105/3	NA